

**ACTION 1:** *Encourage The Use Of Cluster Type Development To Preserve Special Hazard Areas.*

<b>Hazard Targeted</b>	Flood
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Town of Stedman Subdivision Ordinance (Zero Lot Line Development)
<b>New, Continuation, Amendment</b>	Completed
<b>Priority</b>	High
<b>Funding</b>	Not Applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Preserve the special hazard area, while allowing property to be developed to its potential density.
<b>Reduce Overall Vulnerability</b>	Limit future developments within the special hazard area.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	On-going
<b>Person(s) or Department Responsible</b>	Cumberland County Planning Department
<b>Benchmark and Indicator Of Progress</b>	Adopted Zero Lot Line Development standards as part of the Stedman Subdivision Ordinance on December 1, 2005 so that developers can maximize their potential density and not encroach into the Special Flood Hazard Area.

**ACTION 2:    *Develop Uniform Flood Damage Prevention Ordinance.***

<b>Hazard Targeted</b>	Flood
<b>Goals Addressed</b>	1
<b>Document Reference, if applicable</b>	Cumberland County Flood Damage Prevention Ordinance
<b>New, Continuation, Amendment</b>	Deletion
<b>Priority</b>	Medium
<b>Funding</b>	Not applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Prohibit new developments within flood hazard areas and maintain compliance with NFIP.
<b>Reduce Overall Vulnerability</b>	Limiting development within the flood hazard areas would reduce the losses during a hazard event.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Long-term
<b>Person(s) or Department Responsible</b>	Cumberland County Engineering Department
<b>Benchmark and Indicator Of Progress</b>	Adopted revised Cumberland County Flood Damage Prevention Ordinance and FIRM maps on October 19, 2006. Due to the fact that County Flood Damage Prevention Ordinance applies to the Town of Stedman, the Technical Committee recommends that this action be deleted from Town of Stedman's actions (See action #6 under Unincorporated Area for further explanation for the deletion of this action).

**Action 3: *Revise The Subdivision Ordinance To Require That All Utilities Be Placed Underground With The Exception Of High Voltage Electrical Transmission Lines.***

<b>Hazard Targeted</b>	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms and Winter Storms)
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Town of Stedman Subdivision Ordinance
<b>New, Continuation, Amendment</b>	Completed
<b>Priority</b>	Medium
<b>Funding</b>	Not Applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Reduce the overall impact of lost utility services and protect the public health, safety, and welfare.
<b>Reduce Overall Vulnerability</b>	Reduce damage cost, lost of services, and eliminate life-threatening situations to citizens and utility companies.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Short-term
<b>Person(s) or Department Responsible</b>	Cumberland County Planning Department and Electrical Providers
<b>Benchmark and Indicator Of Progress</b>	Approved an amendment that states -All utilities within a development shall be placed underground except for high voltage electrical lines" on December 1, 2005. Mapping of underground utilities is the responsibility of the electrical providers for the Town.

**ACTION 4:    *Develop A Program To Ensure Drainage Ways, Culverts And Storm Drains Are Free Of Debris.***

<b>Hazard Targeted</b>	Flood
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	
<b>New, Continuation, Amendment</b>	Completed
<b>Priority</b>	High
<b>Funding</b>	Stormwater Fund, State and Federal sources

**How the Action Will:**

<b>Mitigate the Hazard</b>	Regular maintenance of debris from drainage ways, culverts and storm drains would provide the proper flow of water and reduce flooding.
<b>Reduce Overall Vulnerability</b>	Reduce vulnerability of flooding to streets, structures, and land located along drainage ways, culverts and storm drains.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Long-term
<b>Person(s) or Department Responsible</b>	Cumberland County Engineering Department
<b>Benchmark and Indicator Of Progress</b>	The Town of Stedman ensures that the drainage ways, culverts and storm drains are free of debris on Town streets and property. NC Department of Transportation roads are their responsible for the maintenance of storm drains.

**ACTION 5:    *Develop A Landscape Ordinance That Will Encourage Protection To Natural Areas Through Design And Provide More Vegetation In Urban Development.***

<b>Hazard Targeted</b>	Flood, Extreme Heat
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Town of Stedman County Zoning Ordinance
<b>New, Continuation, Amendment</b>	Completed
<b>Priority</b>	Moderate
<b>Funding</b>	Not applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Provide more pervious area for natural drainage and provide reduction in extreme heat.
<b>Reduce Overall Vulnerability</b>	Reduce the vulnerability to localized flooding and extreme heat.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Long-term
<b>Person(s) or Department Responsible</b>	Cumberland County Planning Department
<b>Benchmark and Indicator Of Progress</b>	The Town of Stedman adopted street tree requirements for all developments within the Town on December 12, 2005.

**ACTION 6:    *Revise The Subdivision Ordinance Requiring Additional Access To Be Used As An Evacuation Route For Developments Located Near Special Hazard Areas.***

<b>Hazard Targeted</b>	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms and Wildfires)
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Town of Stedman Subdivision Ordinance
<b>New, Continuation, Amendment</b>	Deferred
<b>Priority</b>	High
<b>Funding</b>	Not applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Will provide an additional access for residents, public safety officials and emergency services to those developments located near a special hazard prone area.
<b>Reduce Overall Vulnerability</b>	Reduce the possibility of a life-threatening situation for residents, public safety and emergency services.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Short-term
<b>Person(s) or Department Responsible</b>	Cumberland County Planning Department
<b>Benchmark and Indicator Of Progress</b>	At this time, Stedman has not adopted an amendment to their Subdivision Ordinance to satisfy this action. The new FIRM the Town adopted in 2006 indicates a Special Flood Hazard Area along the southern portion of the Town and at this time 68% of the parcels that contains flood area are not developed.

**ACTION 7: *Identify Areas That Are Susceptible To Wildfires And Consider Prescribed Fire (Controlling Burning) Management Tool To Reduce The Impact of Wildfire Hazards.***

<b>Hazard Targeted</b>	Wildfires
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Not applicable
<b>New, Continuation, Amendment</b>	Deferred
<b>Priority</b>	High
<b>Funding</b>	Not applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Provide a mechanism to limit the amount of damage to those areas acceptable to wildfires. This is very important to the small rural municipalities because most of the land surrounding the Towns is undeveloped, woodlands, and farmland.
<b>Reduce Overall Vulnerability</b>	Reduce the amount of woodland that is loss to wildfires.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Long-term
<b>Person(s) or Department Responsible</b>	NC Forest Service
<b>Benchmark and Indicator Of Progress</b>	Currently the Cumberland County office of Forest Service has developed a draft risk assessment of those areas of Cumberland County (including the Town of Stedman) that are susceptible to wildfires. This risk assessment is general in nature and for in office use only. The NC Forest Service has completed five Community Wildfire Protection Plans for certain areas of Cumberland County.

## IMPLEMENTATION

Plan implementation will start from the time that it is adopted. The Town Administrator will be responsible for pursuing the development of policies, programs, ordinances, amendments, and regulations as they are assigned by the actions listed above. The Cumberland County Joint Planning Board staff will prepare these planning documents, ensuring that the goals, objectives and strategies of these documents will be consistent with the Hazard Mitigation Plan and would not increase the hazard vulnerability or decrease hazard capability of Stedman. The Cumberland County Joint Planning Board (also serving on the Cumberland County Hazard Mitigation Steering Committee) would receive all planning documents for review and approval. Their comments are forwarded to the Stedman Board of Commissioners for review and adoption. The public will have an opportunity to provide input at public hearings before these entities. It will be the responsibility of the Town Manager to ensure that these actions are carried out within the allocated time frame. It will be the responsibility of Town Administrator to ensure that these actions are carried out within the allocated time frame.

## MONITORING, EVALUATING, AND REPORTING PROGRESS

Periodic monitoring and reporting of the Stedman Hazard Mitigation Plan of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update is required to ensure that the goals and objectives for Town of Stedman are kept current and that local mitigation efforts are being carried out. The monitoring and reporting is to supplement the Plan within the five-year cycle. The Cumberland County Emergency Services Department will act as the contact and clearing house for relevant information.

The Plan shall be reviewed annually, unless a situation occurs making it necessary to review sooner (e.g. natural disasters). The Town of Stedman shall request that the Cumberland County Joint Planning Board include this annual review in the Board's Work Program. The review will be coordinated with The Cumberland County Emergency Management Services Department. Then the report will be forwarded to the Stedman Board of Commissioners for review and adoption. The public will be given the opportunity to provide input at public hearings before the Cumberland County Joint Planning Board and the Stedman Board of Commissioners.

The annual report will include the following:

1. An evaluation of the effectiveness and appropriateness of the mitigation actions proposed in the Plan.
2. A list of problems that have occurred in the implementation process.
3. Changes in Stedman's priorities.
4. Recommendations for changes, revisions, or amendments to the Plan.

The following questions will be helpful to Stedman in assessing their Hazard Mitigation Plan: (1) Do the goals and objectives address current and expected conditions; (2) Has the nature or magnitude of risks changed; (3) Are the current resources appropriate for implementing the Plan; (4) Are there implementation problems, such as technical, political, legal or coordination issues with other agencies/departments; (5) Have the outcomes occurred as expected; and (6) Did the agencies/departments and other partners participate in the Plan and planning process as proposed.



## REVISIONS AND UPDATES

As updates occur, the date, reason and responsible party should be noted. Updates or revisions, which affect the Plan as a whole and impact any other jurisdiction(s), will require the approval of the jurisdiction(s) governing body.

At the end of every five-year cycle, the Hazard Mitigation Technical Committee will submit the hazard profile, vulnerability assessment and local capability assessment updates or revisions to FEMA and NCDEM for review. Increased development, increased exposure to certain hazards, the development of new mitigation capabilities or techniques and changes to Federal or State legislation are examples of changes that may affect the condition of the Plan. The Cumberland County Joint Planning Board will review the updated Plan and its recommendation will be forwarded to the Stedman Board of Commissioners for consideration and adoption. Copies of any revision, amendment or update to the Plan must be filed with the Stedman Town Administrator and Cumberland County Emergency Services Department and added to the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update and will be available to the public for review.

## Resolution

WHEREAS, the Town of Stedman desires to remain eligible for the State and Federal disaster relief funds in the event of a declared disaster in the Town; and

WHEREAS, the Stedman Board of Commissioners recognizes the value of having a Plan in place for identifying, prioritizing, and mitigating potential and real hazards that could affect the Town of Stedman.

WHEREAS, Cumberland County Joint Planning Board Staff prepared the Stedman Hazard Mitigation Plan as part of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update and has revised the Plan as suggested by the North Carolina Division of Emergency Management after its submittal to all appropriate government entities for review and comments; and

WHEREAS, the North Carolina Division of Emergency Management has endorsed the Stedman Hazard Mitigation Plan Update as part of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update; and

NOW, THEREFORE, BE IT RESOLVED by Stedman Board of Commissioners that it adopts the Stedman Hazard Mitigation Plan of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update; and

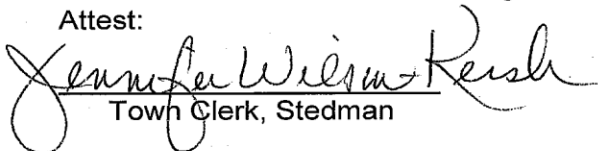
BE IT FURTHER RESOLVED that the Stedman Board of Commissioners resolve to annually review the Plan and make revisions to all sections regarding the Town of Stedman in the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update when new data and information becomes available, as mitigation measures are achieved, and as mitigation strategies evolve; and

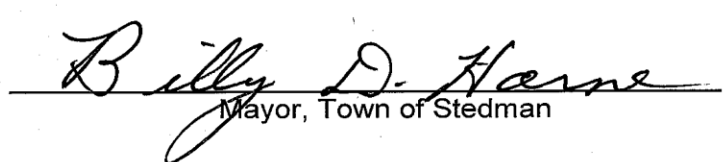
FURTHER, that Town of Stedman may update and revise the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update as it relates to the Town of Stedman but does not affect any other jurisdiction. If any revision, update or amendment that involves another jurisdiction, the updates and revisions must be approved by the governing body of the affected jurisdiction. Copies of any revision, amendment or update to the Plan by the Town of Stedman must be kept on file with their Clerk and with the Cumberland County Emergency Services Department and added to the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update; and

FURTHER, that administrative changes, wording corrections, the hazard analysis, and vulnerability assessment or other such portions of the Stedman Hazard Mitigation Plan as part of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update, do not require additional action by the Stedman Board of Commissioners.

Adopted 4th day of August, 2011

Attest:

  
Town Clerk, Stedman

  
Mayor, Town of Stedman

# VULNERABILITY ASSESSMENT

The Vulnerability Assessment for the Town of Stedman is based on current data in the County departmental database, the County's GIS data, past records, and other local, State and Federal agencies. This collective data addresses both existing and potential future conditions, types of hazards, and delineates areas in the Town that could be impacted. Stedman has experienced some of the same hazard events as the overall County, as presented in the Vulnerability Assessment of the overall County Section and the Identifying and Profiling Hazards Section above. The types of hazards and the areas they impact, relative to Stedman are presented in **A1 - Hazard Identification and Analysis** and **Table A2 - Summary of Hazard Vulnerability by Jurisdiction** located in the Appendix A - Hazard Profile.

## Current Conditions

The impact that these hazards may have on the Town's private development is as outlined in **Table 31 - Stedman Private Buildings Vulnerability Assessment**. According to the data gathered, the hazards listed above could potentially impact 386 single-family homes valued at \$98,382,124 and 1,023 persons in the Town. There are eight multi-family buildings valued at \$4,239,054 with 77 inhabitants that could be impacted. The commercial impact is 53 buildings with assessed values of \$23,934,504 and 220 persons. There are no industrial uses in the Town. Other private buildings in the town include 13 buildings valued at \$11,760,828 impacting 37 persons. The total impact on private development in the Town from all hazards is 460 structures valued at \$138,316,510 and 1,357 persons.

The base data included the identification and inventorying critical facilities as shown in **Table 32 - Stedman Public Buildings and Critical Facilities Vulnerability Data**. The critical facilities identified are as shown in Appendix B - Cumberland County Ranked Critical Facilities. Designated critical facilities in Stedman include schools, fire station, police station, infrastructure, government offices, and hazardous materials facilities as shown on **Map 26 - Stedman Critical Facilities Location**. There are two schools (Stedman Elementary and Stedman Primary Schools) valued at \$15,370,906 impacting 594 persons. There is one fire station (Stedman Volunteer Fire Department) valued at \$2,119,262 impacting 20 persons and one police station (located within the Town Hall) valued at \$325,810 impacting 3 persons. Critical infrastructure in the Town includes 63,266 linear feet of water lines valued at \$5,693,940; and 78,001 linear feet of sewer lines valued at \$11,700,150; 66,488 linear feet of streets valued at \$12,566,232; four sewage lift stations valued at \$1,600,000; two water towers valued at \$912,000; two bridges valued at \$800,000; and one government office valued at \$454,614 impacting six persons. There are a total of 11 critical public structures valued at \$20,782,592 and critical infrastructure valued at \$30,760,322 in the Town impacting 623 persons.

In summary, the total number of buildings and facilities in Stedman subject to a natural hazard is 471 structures and infrastructure valued at \$189,859,424 impacting 1,980 persons.

Wildfires are possible but due to urbanization and farming operations near the Town, most of the thick-forested areas have been denuded to the point that it would be difficult for a wildfire to thrive. Development rules and regulations for construction in the Town have provided adequate separation between the structures that deter wildfires. The location of a fire station in the Town also provides a quick response to fires that allows for early extinction of fires.

The Town of Stedman is impacted by natural flood hazard with approximately 65 acres of land within the flood prone area. The new flood mapping project completed and adopted by the Town in 2006 designates Special Flood Hazard Area inside the Town. Data and a map showing the vulnerable facilities and structures are on **Table 33 - Stedman Private Buildings Flood Vulnerability Assessment**, **Table 34 - Stedman Public Buildings and Critical Facilities Flood Vulnerability Data**, and in **Map 27 -**

**Stedman Facilities and Structures within the Flood Prone Areas.** Current data regarding flooding for private buildings shows there are five single family dwellings valued at \$1,721,950 impacting 14 persons; and two commercial buildings valued at \$880,798 impacting 42 persons. A summary of the private buildings subject to flooding in Stedman shows there are seven buildings valued at \$2,602,748 impacting 56 persons. Data for public buildings and critical facilities shows 449 linear feet of water lines valued at \$40,410; 3,821 linear feet of sewer lines valued at \$573,150; 635 linear feet of streets with an estimated value of \$120,015; and two bridges valued at \$800,000 within the Special Flood Hazard Area. In summary, there are seven buildings and infrastructure totaling \$4,136,323 impacting 56 persons in Stedman. Some buildings are included in the Flood Vulnerability Assessment, if the parcel of land the building is on intersects the Flood Area, even though these buildings are not within the Special Flood Hazard Area. The Town of Stedman has not had any repetitive loss structures. Prior to new digital FIRM maps the Town of Stedman did not have any designated flood located inside the Town.

Stedman's drainage sub-basins are Big Creek and Sandy Creek basins. The northern drainage basin (Big Creek) flows into the South River and drains a small area of the Town primarily north of Highway 24. The Sandy Creek Basin, which includes the Lockamy, Muddy, Long, and Vineyard streams as well as the Honeycutt and Maxwell Canals, also drains into the South River east of the Town on the Cumberland - Sampson County line. In 1985 the USDA and NCDNRCD prepared a Plan to alleviate drainage problem in the Town and the surrounding area. Issues raised in this Plan included concerns from the NC Division of Health Services about mosquito control, as well as concerns of citizens about water ponding around dwellings, inadequate outlets for roads and ditches, and flooded septic tanks. The Plan recommended 15.9 miles of channel excavation (deepening and widening); 1.4 miles of channel clearing and snagging; the placement of eight water control structures; and the accelerated land treatment of 1,500 acres of cropland in the Sandy Creek Watershed. This Plan was never implemented due to funding problems.

## **Vulnerable Populations**

Special populations are vulnerable to natural hazards due to the lack of resources or control over certain variables necessary for recovery. These special populations include the elderly (persons over 75 years old), the disabled, non-English speaking persons, the institutionalized, households without telephones and vehicles, those below the poverty level, those living in high hazard areas, those living in certain mobile homes, and renters. This population data was obtained from the profile of General Demographic Characteristics of Stedman in the 2000 Census.

Current Census data shows that the Town of Stedman has 35 persons over 75 years old and no institutionalized persons. Additionally, there are 109 persons with disabilities, one individual with a language barrier, and eight families are listed as below the poverty level. There are 12 households in the Town without a vehicle and three households without telephone access. Approximately 46 mobile homes and 52 rental units are listed in the Town. Since the 2010 Census data was not available during the preparation of this document, we have kept the Census 2000 data in the document. If this data comes available during the review process, we will update the final document with the 2010 data.

## **Development Trends and Projections**

Development trends that may impact hazard mitigation include the direction of growth, current zoning and future land use. Activities in the Town that may impact future development includes the Town's provision of public sewer and water by tying into the Fayetteville Public Works Commission System; the anticipated widening and relocation of Highway 24; and the anticipated street enhancements along Clinton Road. The completion of the Fayetteville Outer Loop will impact the Town by providing quick access into the Fayetteville metro area. These actions will enhance the attractiveness of the Town for development.

Stedman zoning districts include agricultural, low-density residential (greater than two units but less than six units per acre), commercial, and manufacturing districts as shown on **Map 28 - Stedman Zoning Map**. Data shows that approximately 14 acres zoned for agricultural (A1), 881 acres are zoned low-density residential (R10, R10M, and R15), 111 acres of commercial (CP, C3, and C1), and 60 acres of manufacturing (M2).

The proposed land use for Stedman is shown on **Map 29 - Stedman Land Use Plan Map**. This map indicates the community's vision for the future use of land. According to the Plan approximately 88 acres for open space, recreation and environmental corridor, 5 acres agricultural, 141 acres suburban density, 473 acres for low density residential, 82 acres of medium density residential, 28 acres of office & institutional, 134 acres of industrial, 104 acres of commercial, and 13 acres of community activity node (non-residential uses).

Projections for private buildings in Stedman in 2025 shows that there will be 468 single family dwellings valued at \$119,344,849 impacting 1,241 persons, 10 multi-family units valued at \$5,142,288 impacting 93 persons, 64 commercial buildings valued at \$29,034,337 impacting 267, and 16 other structures valued at \$14,266,761 impacting 45 persons. In summary, the number of private buildings in Stedman subject to a natural hazard in 2025 is projected to be 558 buildings with an estimated value of \$167,788,235 impacting 1,646 persons (See Appendix C-Methodology for projection method). The projected number of private buildings in areas subject to localized flooding in 2025 is six single family dwellings valued at \$2,088,854 impacting 17 persons; and two multi-family structures valued at \$1,068,474 impacting 51 persons.

The projected number of public buildings and critical facilities in the Special Flood Hazard Area includes 545 feet of water lines valued at \$49,020; 4,635 feet of sewer lines valued at \$695,274; 770 feet of streets valued at \$145,587; and two bridges valued at \$970,460. In summary, there is projected in 2025 to be eight buildings and infra-structure valued at \$5,017,668 impacting 68 person in Stedman's special Flood Hazard Area. The projected number of public buildings and critical facilities vulnerable in 2025 include five sewage lift stations valued at \$1,940,919; two water towers valued at \$1,106,324; two schools valued at \$18,646,055 impacting 721 persons; 76,746 feet of water lines valued at \$6,907,174; 94,621 feet of sewer lines valued at \$14,193,154; 80,655 feet of street valued at \$15,243,776; two bridges valued at \$970,460; one police station valued at \$395,232 impacting four persons; one fire station valued at \$2,570,823 impacting 24 person; one government office valued at \$551,481 impacting seven persons. The total projected public buildings and critical facilities vulnerable for the year 2025 in Stedman is 570 buildings and infrastructure valued at \$230,313,563 impacting 2,402 persons.

**Table 31 - Stedman Private Buildings Vulnerability Assessment**

**Hazard Type(s):** Hurricane, Drought, Localized Flooding, Thunderstorms, Severe Winter Storms, Tornadoes, Extreme Heat, Wildfires, and Earthquakes

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Private Buildings	* Current Value	Current Number of People	Projected Number of Private Buildings	Projected Value	Projected Number of People
Single-Family Residential	386	\$98,382,124	1,023	468	\$119,344,849	1,241
Multi-Family Residential	8	\$4,239,054	77	10	\$5,142,288	93
Commercial	53	\$23,934,504	220	64	\$29,034,337	267
Industrial	0	\$0	0	0	\$0	0
Other	13	\$11,760,828	37	16	\$14,266,761	45
<b>Subtotal</b>	<b>460</b>	<b>\$138,316,510</b>	<b>1,357</b>	<b>558</b>	<b>\$167,788,235</b>	<b>1,646</b>

\* Values and building counts from County GIS - January 2010  
The methodology used in preparing this data is described in Appendix C.

**Table 32 - Stedman Public Buildings and Critical Facilities Vulnerability Assessment**

**Hazard Type(s):** Hurricane, Localized Flooding, Drought, Thunderstorms, Severe Winter Storms, Tornadoes, Extreme Heat, Wildfires, and Earthquakes

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Public Buildings & Critical Facilities	* Current Value	Current Number of People	Projected Number of Public Buildings	Projected Value	Projected Number of People
Sewage Lift Stations	4	\$1,600,000	0	5	\$1,940,919	0
Water Tower	2	\$912,000	0	2	\$1,106,324	0
Hospitals/Rest Homes	0	\$ 0	0	0	\$0	0
Schools	2	\$15,370,906	594	2	\$18,646,055	721
Infrastructure (roads, bridges, drainage, dams, and etc.)	Water Lines – 63,266' Sewer Lines - 78,001' Streets – 66,488' Bridges – 2	\$5,693,940 \$11,700,150 \$12,566,232 \$800,000	N/A	Water Lines – 76,746' Sewer Lines – 94,621' Streets – 80,655' Bridges - 2	\$6,907,174 \$14,193,154 \$15,243,776 \$970,460	N/A
Police Stations	1	\$325,810	3	1	\$395,232	4
Fire Stations	1	\$2,119,262	20	1	\$2,570,823	24
Hazard Materials Facilities	0	\$0	0	0	\$0	0
Government offices	1	\$454,614	6	1	\$551,481	7
Emergency Shelters	0	\$0	0	0	\$0	0
Public Housing	0	\$0	0	0	\$0	0
<b>Subtotal</b>	<b>Buildings - 11 Infrastructure</b>	<b>\$20,782,592 \$30,760,322</b>	<b>623</b>	<b>Buildings - 12 Infrastructure</b>	<b>\$25,210,834 \$37,314,563</b>	<b>756</b>
<b>TOTAL:</b>	<b>Buildings - 471 &amp; Infrastructure</b>	<b>\$189,859,424</b>	<b>1,980</b>	<b>Buildings - 570 &amp; Infrastructure</b>	<b>\$230,313,632</b>	<b>2,402</b>

\* Values and building counts from County GIS - January 2010  
The methodology used in preparing this data is described in Appendix C.

**Table 33 - Stedman Private Buildings Flood Vulnerability Assessment**

Type(s) Hazard: Flood

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Private Buildings	* Current Value	Current Number of People	Projected Number of Private Buildings	Projected Value	Projected Number of People
Single-Family Residential	5	\$1,721,950	14	6	\$2,088,854	17
Multi-Family Residential	2	\$880,798	42	2	\$1,068,474	51
Commercial	0	\$0	0	0	\$0	0
Industrial	0	\$0	0	0	\$0	0
Other	0	\$0	0	0	\$0	0
<b>Subtotal</b>	<b>7</b>	<b>\$2,602,748</b>	<b>56</b>	<b>8</b>	<b>\$3,157,328</b>	<b>68</b>

\* Values and building counts from County GIS - January 2010  
The methodology used in preparing this data is described in Appendix C.



**Table 34 - Stedman Public Buildings & Critical Facilities Flood Vulnerability Assessment**

Type(s) Hazard: Flood

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Public Buildings & Critical Facilities	* Current Value	Current Number of People	Projected Number of Public Buildings	Projected Value	Projected Number of People
Sewage Treatment	0	\$ 0	0	0	0	0
Water Tower	0	\$ 0	0	0	0	0
Rest Home	0	\$ 0	0	0	0	0
School	0	\$ 0	0	0	0	0
Infrastructure (roads, bridges, drainage, dams, etc.)	Water Lines - 449' Sewer Lines - 3,821' Streets - 635' Bridges - 2	\$40,410 \$573,150 \$120,015 \$800,000	N/A	Water Lines - 545' Sewer Lines - 4,635' Streets - 770' Bridges - 2	\$49,020 \$695,274 \$145,587 \$970,460	N/A
Police Station	0	\$0	0	0	\$0	0
Fire Station	0	\$0	0	0	\$0	0
Hazard Materials	0	\$0	0	0	\$0	0
Government offices	0	\$0	0	0	\$0	0
Emergency Shelter	0	\$0	0	0	\$0	0
Public Housing	0	\$0	0	0	\$0	0
<b>Subtotal</b>	<b>Buildings - 0 Infrastructure</b>	<b>\$0 \$1,533,575</b>	<b>0</b>	<b>Buildings - 0 Infrastructure</b>	<b>\$0 \$1,860,341</b>	<b>0</b>
<b>TOTAL:</b>	<b>Buildings - 7 &amp; Infrastructure</b>	<b>\$4,136,323</b>	<b>56</b>	<b>Buildings - 8 &amp; Infrastructure</b>	<b>\$5,017,668</b>	<b>68</b>

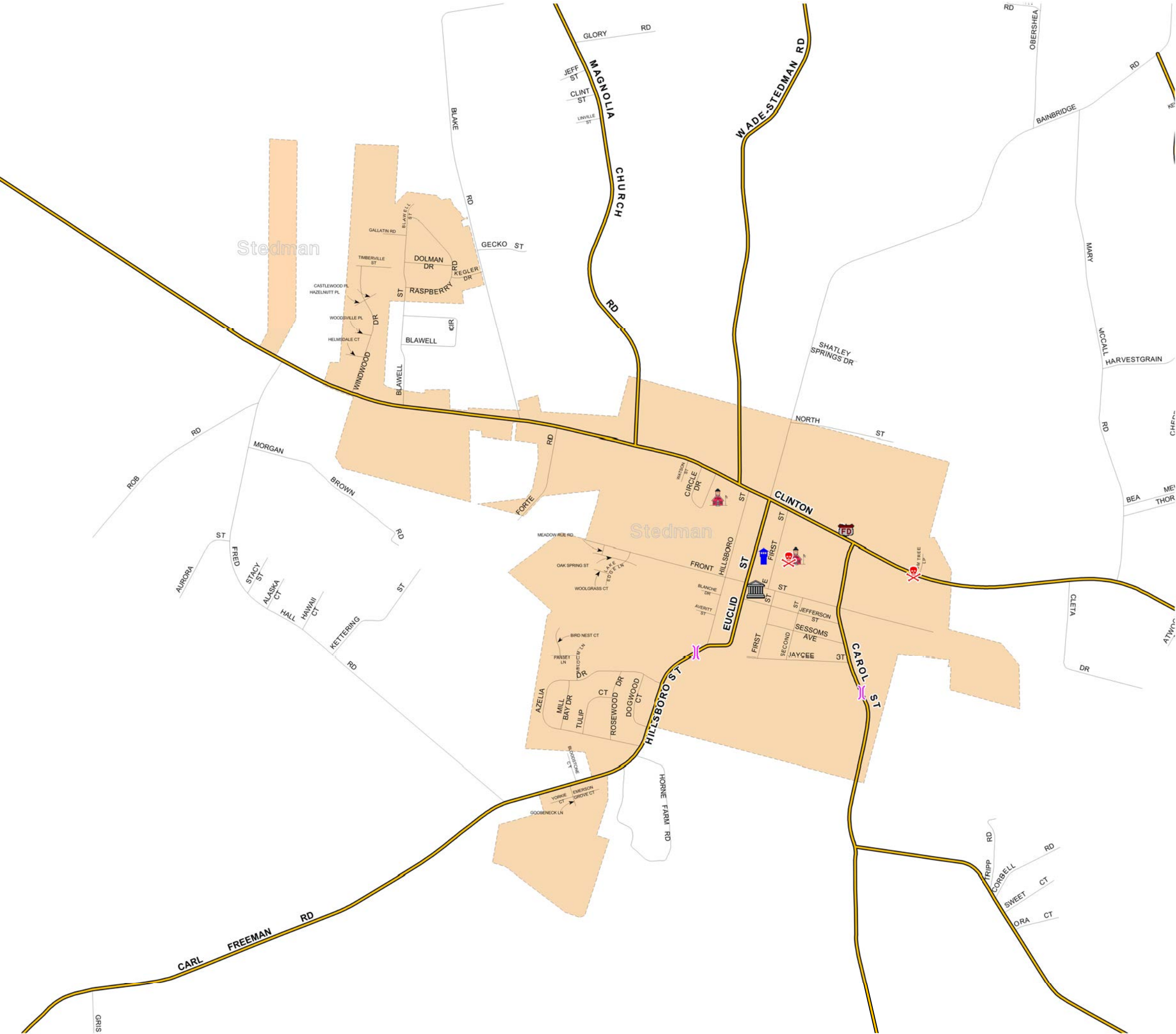
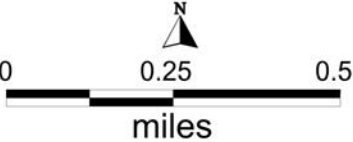
\* Values and building counts from County GIS - January 2010  
The methodology used in preparing this data is described in Appendix C.

Map 26

# Town of Stedman Critical Facilities

Legend

-  Hazardous Materials
-  Water Tower
-  Bridge
-  Town Hall *(Includes Police Station)*
-  Fire Department
-  Public School
-  Municipal Boundary
-  Streams-Rivers
-  Lakes

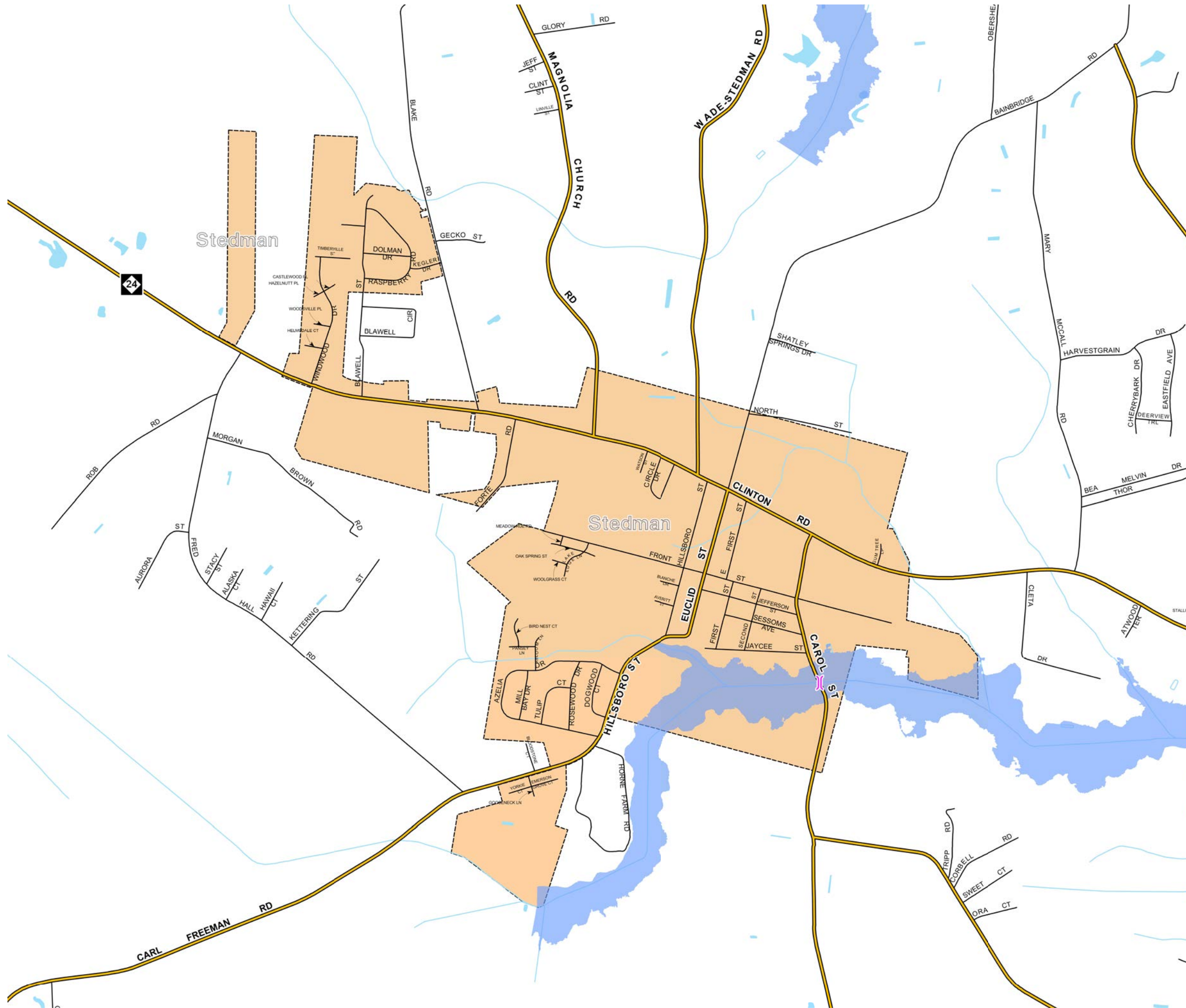


# Map 27

## Town of Stedman

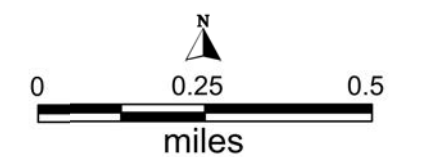
### Critical Facilities

### Special Flood Hazard Area



### Legend















-  Bridge
-  Municipal Boundary
-  Streams-Rivers
-  Lakes
-  Special Flood Hazard Area





# **MAP 28** **TOWN OF STEDMAN** **ZONING**

## **Legend**












-  SPECIAL FLOOD HAZARD AREA
-  MUNICIPAL BOUNDARY
-  A1 - AGRICULTURAL DISTRICT
-  RR - RESIDENTIAL DISTRICT
-  R15- RESIDENTIAL DISTRICT
-  R10 - RESIDENTIAL DISTRICT
-  R10M - RESIDENTIAL DISTRICT
-  R6A - RESIDENTIAL DISTRICT
-  R5A - RESIDENTIAL DISTRICT
-  C(P) - PLANNED DISTRICT
-  C1(P)- PLANNED DISTRICT
-  C3 - COMMERCIAL DISTRICT
-  C1 - COMMERCIAL DISTRICT
-  M2 - INDUSTRIAL DISTRICT

**NOTE: ALL OF THE TOWN OF FALCON IS DESIGNATED FOR THE FOLLOWING HAZARDS: HURRICANES, TORNADOES, THUNDERSTORMS, DROUGHTS, SEVERE WINTER STORMS, EXTREME HEAT, WILDFIRES, AND EARTHQUAKES.**

SCALE: NOT TO SCALE

**MAP 29**  
**TOWN OF STEDMAN**  
**LAND USE PLAN**

**Legend**

-  SPECIAL FLOOD HAZARD AREA
-  MUNICIPAL BOUNDARY
-  SUBURBAN DENSITY RESIDENTIAL
-  LOW DENSITY RESIDENTIAL
-  MEDIUM DENSITY RESIDENTIAL
-  OFFICE & INSTITUTIONAL
-  COMMUNITY ACTIVITY NODE
-  HEAVY COMMERCIAL
-  LIGHT COMMERCIAL
-  LIGHT INDUSTRIAL
-  OPEN SPACE

**NOTE: ALL OF THE TOWN OF FALCON IS DESIGNATED FOR THE FOLLOWING HAZARDS: HURRICANES, TORNADOES, THUNDERSTORMS, DROUGHTS, SEVERE WINTER STORMS, EXTREME HEAT, WILDFIRES, AND EARTHQUAKES.**

SCALE: NOT TO SCALE



# CAPABILITY ASSESSMENT

## Local Departments, Agencies and Organizations

The Town of Stedman operates under the Mayor/Council form of government and employs a Town Administrator, an Assistant Clerk, two maintenance men (1 full-time, 1 part-time) and a Police Chief. The Town provides administrative services, garbage pick-up, general maintenance, police protection, and reading of water meters. Operation and maintenance of the water and sewer system is contracted with Fayetteville Public Works Commission. Cumberland County EMS and Fire Station #23 Stedman Volunteer Fire Department provide emergency services. Cumberland County Sheriff's Department provides additional police protection to ensure 24 hour a day protection. All other services are contracted with various County departments and local agencies listed in this document. Cumberland County Animal Control, Health, Mental Health, Social Services, and Solid Waste Departments provide public health and human services; Fayetteville/Cumberland Parks and Recreation Department provides maintenance assistance for the Town Park; Cumberland County Planning and Inspections provides planning services and enforcement of the State Building Code; County Engineering administers the Flood Damage Prevention Ordinance; and the County Tax Administration Department collects applicable taxes, fees and assessments for the Town. There are numerous State and Local Agencies and Organizations that provide services relevant to hazard mitigation for Stedman residents. A complete list was presented within the Cumberland County Capability Assessment above.

## Policy and Program Capability

This section includes the identification and evaluation of existing ordinances, policies, and programs that are relevant to the Town of Stedman's vulnerability to natural hazards. This inventory consists of specific mitigation initiatives, their effectiveness and strategies to improve mitigation effectiveness. Additionally, this information is contained within **Table 35 – Stedman Inventory of Local Ordinances, Policies and Programs Relevant to Hazard Mitigation**.

Most of the actions in the original Mitigation Plan that require ordinance revisions or policy changes have been completed and/or adopted. The Planning Staff currently has an ongoing process of rewriting, updating (zoning and subdivisions) and creating new ordinances for several of the local jurisdictions, including Town of Stedman. These ordinances already comply with many of the mitigation actions that the Town has already endorsed. Those actions that have not been completed are more developer resistance and cost prohibit. The Technical Committee will continue educating citizens, elected officials and the development community concerning our mitigation efforts and actions.

Stedman Subdivision Ordinance - The Town of Stedman Subdivision Ordinance contains several sections that are relevant to hazard mitigation. These sections address specific design standards that mitigate hazards such as: drainage, flooding, and fire.

Stedman Zoning Ordinance - The Town of Stedman Zoning Ordinance contains a section pertaining to hazard mitigation that provides specific standards that address building separation, thus reducing the possibility of uncontrolled fire.

Flood Damage Prevention Ordinance - Cumberland County has developed and adopted a Flood Damage Prevention Ordinance designed to minimize the public and private losses due to flood conditions in specific areas and to protect the public health, safety and welfare. The Town of Stedman adopted this ordinance, which establishes the requirements for elevation and flood proofing (non-residential) to base flood elevation and a development permit.

National Flood Insurance Program and Community Rating System - The National Flood Insurance Program (NFIP) provides flood insurance to individuals in local jurisdictions that are members of the program. Membership in the Program is based upon the adoption and enforcement of floodplain management and development regulations. Compliance of the NFIP for the Unincorporated Area, Eastover, Falcon, Godwin, Linden, Stedman and Wade is responsibility of the Cumberland County Engineering Department. They maintain the Cumberland County flood maps and Flood Damage Prevention Ordinance and issue Floodplain Development Permits for those jurisdictions in accordance with compliance of NFIP. An element of the NFIP is the Community Rating System (CRS), which adjusts flood insurance premiums relative to a local jurisdiction's investment in flood damage mitigation. Inclusion in the CRS involves submitting a local jurisdiction's floodplain management procedures for evaluation.

NCDOT Subdivision Roads Minimum Construction Standards - The North Carolina Department of Transportation has established minimum construction standards for new subdivision roads (to be dedicated as public or private). According to North Carolina General Statutes, all new subdivision roads connecting to the State system must obtain a construction permit from a Division of Highways District Engineer and must meet these construction standards. Standards relevant to hazard mitigation include: surface and subsurface drainage, bridges, roadway dams, and specifications for design and construction to accommodate emergency vehicles.

#### 2030 Cumberland County Growth Vision Plan Policies, Actions, and Map

Cumberland County, along with all the municipalities in the County adopted this land use plan which serves as a guide for development. This Plan contains several recommendations relevant to hazard mitigation. The Plan recommends the provision of open space/environmental corridors along rivers and major water features, which reduces the amount of development within and adjacent to the floodplain and protects the natural riparian cover adjacent to these water features. Recommendations also include using environmental corridors as a network of greenways connecting recreation and school facilities with natural areas. The Plan recommends all development activity within the Special Flood Hazard Area be limited to low intensity uses. Development standards are also recommended to reduce the amount of impervious surfaces and to protect existing natural features. A general Land Use Plan Map was also adopted, which provides a guide for orderly growth and development. Stedman adopted the Plan on August 6, 2009.

#### Cumberland County Land Use Policies Plan

Wade, along with all the municipalities in the Cumberland County and Cumberland County have developed and adopted a land use policies plan which serves as a guide for development. This Plan contains location criteria for development relevant to hazard mitigation by limiting the type and intensity of development within the Special Flood Hazard Area. Stedman adopted the Plan on August 6, 2009.

Stedman Area Detailed Land Use Plan - The Stedman Area Detailed Land Use Plan addresses several issues relevant to hazard mitigation. These issues include: a thoroughfare plan that provides for safe vehicular movement, protection of the natural drainage system from urban encroachment, and a plan for orderly growth and development. The Stedman Board of Commissioners and the Cumberland County Board of Commissioners adopted the Plan, as a portion of the Study falls within the Unincorporated Area of the County.

2000 International Building Code with North Carolina Amendments - This Code provides specific standards for plumbing, building, mechanical and electrical construction, mandated by the State of North Carolina. This Code is under the jurisdiction of the North Carolina Department of Insurance and is enforced locally by the Cumberland County Planning and Inspections Department.

N.C. General Statutes 113A Article 4 Sedimentation Pollution control Act - This Act provides a mechanism to protect existing natural resources and the public health, safety, and welfare through

sedimentation and erosion control. The State of North Carolina administers permitting and enforcement measures for Cumberland County and the municipalities therein.

Mid-Carolina Rural Planning Organization - The Mid-Carolina Rural Planning Organization provides detailed planning and classifications for the road network within the Rural Planning Area (which includes Stedman) in order to provide adequate traffic movement. Classifications and design specifications are assigned to roads in order to ensure adequate right-of-way and design as transportation improvements are initiated.

Cumberland County Emergency Operations Plan - Cumberland County prepared and adopted this Plan in order to reduce the vulnerability of people and property to a disaster and to provide an effective means of response in the event of a disaster. This Plan also includes an inventory of critical facilities that would be impacted during a disaster. The Town of Stedman adopted this Plan.

Sandhills Area Land Trust - The Sandhills Area Land Trust is a non-profit organization working with citizens, developers, local government, and landowners to preserve the natural resources and environment within the Sandhills. This organization is working with Cumberland County, as well as 6 other counties, to accept donations of land, arranges leases to protect special land holdings and works to negotiate conservation easements.

Cape Fear River Assembly - The Cape Fear River Assembly has a membership of approximately 400 and a 34-member Board of Directors representing 29 counties within the Cape Fear River Basin. The purpose of the Assembly is to provide the highest quality of life for residents within the Cape Fear River Basin through proper management of the Cape Fear River, its tributaries and adjacent land uses.

Sustainable Sandhills - This initiative, comprised of members of communities within 6 counties bordering Fort Bragg and Camp Mackall and the Military, is working to provide a model for regional sustainability planning. Sustainability planning focuses on balancing preservation of natural resources, economic development strategies, development, and Military operations. Cumberland County is represented within this initiative.

Joint Compatible Land Use Study 2003 - The purpose of this Study is to provide policies and implementation measures to mitigate conflicts between urban development and Military operations at Fort Bragg, Pope Air Force Base and Camp Mackall. Cumberland County is included within this Study.



**Table 35 - Stedman Inventory of Local Ordinances, Policies and Programs Relevant to Hazard Mitigation**

<b>TITLE &amp; ADOPTION DATE</b>	<b>DOCUMENT REFERENCE</b>	<b>PURPOSE &amp; DESCRIPTION</b>	<b>MITIGATION EFFECTIVENESS</b>	<b>RATIONALE FOR EFFECTIVENESS</b>	<b>MITIGATION STRATEGY</b>
Town of Stedman Subdivision Ordinance Revision- 2/5/08	Section 3.11	To provide for existing or future drainage needed to protect public health, safety, and welfare.	MODERATE	This Ordinance establishes minimum development standards.	Establish detailed development standards.
Town of Stedman Subdivision Ordinance Revision- 2/5/08	Section 3.16	To provide standards for lots located within areas of special flood hazard.	HIGH	This Ordinance provides specific standards that address lots subject to flooding.	
Town of Stedman Subdivision Ordinance Revision - 2/5/08	Section 3.17	To provide standards for street design needed to protect the public health, safety, and welfare.	MODERATE	This Ordinance provides specific standards that address street design to accommodate fire and rescue vehicles.	Amend to require additional entrance into the developments, especially in special hazard areas, for rescue vehicle and evacuation routes.
Town of Stedman Subdivision Ordinance Revision - 2/5/08	Section 3.20, 3.21, 3.22 & 3.24	To provide standards for adequate physical separation of buildings to protect the public health, safety, and welfare.	HIGH	This Ordinance provides specific standards that address building separation.	
Town of Stedman Subdivision Ordinance Revision - 2/5/08	Section 4.1	To provide standards for the construction of streets within a subdivision.	HIGH	This Ordinance provides specific standards that address drainage relevant to streets.	
Town of Stedman Subdivision Ordinance Revision - 2/5/08	Section 4.3	To provide standards for the construction of or improvements within a subdivision.	MODERATE	This Ordinance provides specific standards that address drainage during construction or improvements within a subdivision and installation of fire hydrants.	Amend to include standards to reduce the amount of impervious surfaces within a subdivision.

<b>TITLE &amp; ADOPTION DATE</b>	<b>DOCUMENT REFERENCE</b>	<b>PURPOSE &amp; DESCRIPTION</b>	<b>MITIGATION EFFECTIVENESS</b>	<b>RATIONALE FOR EFFECTIVENESS</b>	<b>MITIGATION STRATEGY</b>
Town of Stedman Zoning Ordinance 9/00	Section 5.3, 7.11, 7.18, 7.26 and 7.3	To provide adequate separation of structures in order to protect the public water quality as well as public health, safety, and welfare.	HIGH	This Ordinance requires separate yard space for buildings, zoning district dimensional requirements and physical separation of mobile homes within a mobile home park.	
Flood Damage Prevention Ordinance 10/19/06		To minimize the public and private losses due to flood conditions in specific areas and to protect the public health, safety, and welfare.	HIGH	This Ordinance outlines general standards required in all special flood hazard areas and specific development standards required in all special flood hazard areas where base flood elevation data has been provided. A floodplain development permit is required.	
National Flood Insurance Program 10/3/00		To provide flood insurance for individuals within jurisdictions having membership in the program. Membership is based upon having floodplain management and development regulations. Compliance to the NFIP is the responsibility of the Cumberland County Engineering Department.	HIGH	Member	
NCDOT Subdivision Roads Minimum Construction Standards 7/1/85	Minimum Design and Construction Criteria Section	To provide standards for the design, construction and maintenance of subdivision roads in order to protect the public health, safety and welfare.	HIGH	This manual outlines specific design, construction and maintenance standards to mitigate potential flooding due to subdivision road construction.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENESS	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
2030 Growth Vision Plan, Policies, and Actions 08/06/09	Pages 37-38	To protect the Special Flood Hazard Area.  To reduce the amount of impervious surfaces.	MODERATE	The Plan recommends all development activities in the Special Flood Hazard Area be limited to low intensity uses such as open space, recreation, and adequately buffered agricultural activities.	
Cumberland County Land Use Policies Plan 08/06/09	Page 28	To protect the Special Flood Hazard Area	MODERATE	The Plan recommends location criteria for development within the Special Flood Hazard Area	
Stedman Area Detailed Land Use Plan 4/1/99	Page 71	To provide an adequate road network to accommodate existing and future vehicular traffic.	HIGH	The Plan recommends a Thoroughfare system that would provide vehicular movement that would not compromise the public health, safety, and welfare.	
Stedman Area Detailed Land Use Plan 4/1/99	Page 72	To protect the natural drainage system from urban encroachment.	HIGH	The Plan recommends a 10-foot wide preservation easement on either side of the banks of the watercourses.	
Stedman Area Detailed Land Use Plan Map 4/1/99	Page 73	To provide an orderly guide for growth and development to protect the public health, safety and welfare.	HIGH	The Plan provides a land use plan map to guide future development decisions.	
2000 International Building Code with N.C. Amendments		To provide specific construction standards to protect the public health, safety, and welfare.	HIGH	This Code provides specific standards for plumbing, building, mechanical and electrical construction.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENESS	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
N.C. General Statutes 113A Article 4 Sedimentation Pollution Control Act		To protect existing natural resources and the public health, safety, and welfare.	HIGH	This Act provides a mechanism for sedimentation and erosion control including permitting and enforcement measures.	
Mid-Carolina Rural Planning Organization		To provide comprehensive transportation planning within the rural portion of Cumberland County in order to protect the public health, safety, and welfare.	HIGH	This Organization provides specific plans and technical support for all types of transportation planning within the Rural Planning Area.	
Cumberland County Emergency Operations Plan 11/06/07		To provide actions to reduce the vulnerability to a disaster and enhance the recovery from a disaster in order to protect the public health, safety, and welfare.	HIGH	This Plan provides actions to be taken to reduce the vulnerability of people and property to disaster establish an effective mechanism to respond in the event of a disaster and identifies critical facilities impacted during a disaster.	
Sandhills Area Land Trust (SALT)		A non-profit organization working to preserve the natural beauty and environment of the Sandhills Region. Cumberland county is one of 7 counties working with SALT.	HIGH	This Organization works with citizens, developers, municipalities and landowners to retain the Region's unique environmental features and positively influence growth and development.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENESS	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
Cape Fear River Assembly		To provide the highest quality of life within the Cape Fear River Basin.	HIGH	This Organization provides scientific study, economic analysis and education in order to make decisions regarding the proper management of the Cape Fear River, its tributaries and adjacent land uses.	
Sustainable Sandhills		To provide regional sustainability planning that preserves natural resources, enhances economic development and improves the quality of life for present and future generations.	HIGH	This Initiative, comprised of members of communities in 6 counties bordering Fort Bragg and Camp Mackall and the Military, is working to provide a cooperative effort to provide a model for regional sustainability planning.	
Joint Compatible Land Use Study 2003		To provide policies and implementation measures to mitigate conflicts between urban development and Military operations on a Regional basis.	MODERATE	This Study provides compatibility measures and land use policy recommendations that have not been adopted.	Adopt the Land Use Study.

Overall, the local ordinances, policies and programs relevant to hazard mitigation are highly effective in terms of hazard mitigation. Several ordinances should be revised to provide stricter development standards and include specific recommendations contained within the 2030 Growth Vision Plan, the Cumberland County Land Use Policies Plan, and the Stedman Area Detailed Land Use Plan.

Review of these existing plans, policies, ordinances and programs has resulted in specific actions to create new ordinances (or revise existing ordinances) that would serve to reduce the hazard vulnerability of the Town of Stedman. Land use, transportation, utility, recreation and capital improvement plans are designed to provide orderly growth and development without endangering the public health, safety and welfare. Preparation, review and revisions of these types of plans are a continuous process. Goals, Actions and information contained within this Hazard Mitigation Plan will be reviewed and incorporated into the planning process. Additionally, the five-year review of the Hazard Mitigation Plan will include an examination of existing plans, policies, ordinances and programs as part of the Capability Assessment as well as Mitigation Strategies.

## **Legal Capability**

Local governments in North Carolina have been authorized by the State legislature to carry out four broad governmental powers: Regulation, Acquisition, Taxation and Spending. As mentioned previously, the Town of Stedman relies upon Cumberland County for regulatory and taxation staffing functions. The following is a summary of North Carolina enabling legislation granting these broad governmental powers relevant to hazard mitigation.

### **Regulation**

#### General Police Power

All municipalities in North Carolina have been granted broad regulatory powers in their jurisdictions. North Carolina General Statutes [NCGS] bestow the general police power on local governments, allowing them to enact and enforce ordinances, which define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people and to define and abate nuisances (including public health nuisances).

Hazard mitigation can be included under the police power to protect the public health, safety, and welfare, therefore counties and municipalities may include requirements for hazard mitigation in local ordinances. Municipalities may also use their power to abate nuisances, which could include by local definition, any activity or condition making people or property more vulnerable to any hazard [NCGS Chapter 160A, Article 8 Delegation and Exercise of the General Police Power to Cities and Towns].

#### Building Codes and Building Inspection

Counties and municipalities can engage in risk reduction measures focusing on strengthening building codes and requiring retrofitting of existing structures and facilities to protect the public health safety, and welfare in the event of a natural hazard.

North Carolina has a State mandatory building code, which applies throughout the State [NCGS 143-138 (c)]. However, local jurisdictions may adopt codes for their respective jurisdictions if approved by the State as providing “adequate minimum standards” [NCGS 143-138 (e)]. Local regulations cannot be less restrictive than the State code. Exempted from the State code are public utility facilities other than buildings; liquefied petroleum gas and liquid fertilizer installations, and farm buildings outside municipal jurisdictions. No State permit may be required for structures under \$20,000. (Note that exemptions apply only to State, not local permits).

The State legislature has also empowered municipalities to carry out building inspections. NCGS Chapter 160A, Article 19, Part 5 allow municipalities to create an Inspections Department, and enumerates its duties and responsibilities, which include enforcing State and local laws relating to the

construction of buildings, installation of plumbing, electrical, heating systems, etc; building maintenance; and other matters.

### Land Use

Through various land use regulatory powers, granted by the State, local governments can control the amount, timing, density, and location of new development. These growth characteristics can determine the level of vulnerability of an area in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning, subdivision, floodplain, stormwater and watershed ordinances.

### Zoning

Zoning is the most basic tool available to control the use of land. The North Carolina General Statutes 160A-381 gives broad enabling authority to municipalities to use zoning as a planning tool. Counties may also regulate inside a municipal jurisdiction at the request of a municipality, as set forth in NCGS 160A-360(d). The statutory purpose for the grant of power is to promote the health, safety, or the general welfare of the community. Land “uses” controlled by zoning include the type of use, such as residential, commercial, industrial, as well as minimum specifications for use such as lot size, building height, setback, density, etc.

Municipalities are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts [NCGS 160A-382]. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text.

### Comprehensive or Master Planning

Within North Carolina, municipalities are required to create or designate a planning agency in order to exercise the regulatory powers related to land use [NCGS 160A-387]. The planning agency may: prepare studies for an area/neighborhood; determine objectives; prepare and adopt plans for achieving objectives; develop and recommend policies, ordinances and administrative means to implement plans; and perform other related duties [NCGS 160A-361].

NCGS 160A-383 requires that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted “in accordance with a plan,” the existence of a separate comprehensive planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community.

### Subdivision Regulation

Subdivision regulations control the division of land into parcels for the purpose of building a development or sale. Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street or a change in existing streets [NCGS 160A-376]. Flood-related subdivision controls typically require that developers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filing or other measures, and they prohibit filling of floodway areas. Subdivision regulations require that subdivision plans be approved prior to the division of land. Subdivision regulation is limited in its ability to directly affect the type of use made of land or minimum specifications for structures.

### Floodplain Regulation

The North Carolina legislature passed the “Act to Prevent Inappropriate Development in the One Hundred-Year Floodplain and to Reduce Flood Hazards” to regulate development within floodways [NCGS 143-214.51-214.61]. It serves as a risk reduction or risk elimination tool depending upon local government use. The purpose of this law is to minimize the extent of floods by preventing obstructions that inhibit water flow and increase flood height and damage; prevent and minimize loss of life, injuries,

property damage and other losses in flood hazard areas; and promote the public health, safety, and welfare of citizens.

The statute directs, rather than mandates, local government to designate a one hundred-year floodplain; adopt local ordinances to regulate uses in flood hazard areas; enforce those ordinances; and grant permits for use in flood hazard areas that are consistent with the ordinance. The statute established minimum standards for local ordinances and provides for variances for prohibited uses such as:

(a) A flood hazard prevention ordinance adopted by a county or city pursuant to this part shall, at a minimum:

1. Meet the requirements for participation in the National Flood Insurance Program and of this section.
2. Prohibit new solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities in the 100-year floodplain except as noted in section (b) below.
3. Provide that a structure or tank for chemical or fuel storage incidental to a use that is allowed under this section or to the operation of a water treatment facility may be located in a 100-year floodplain only if the structure or tank is either elevated above base flood elevation or designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.

(b) A flood hazard prevention ordinance may include a procedure for granting variances for uses prohibited under G.S. 143-215.54.

4. A county or municipality shall notify the Secretary of Crime Control and Public Safety of its intention to grant a variance at least 30 days prior to granting the variance. A variance may be granted upon finding that all of the following apply:
  1. The use serves a critical need in the community.
  2. No feasible location exists for the location of the use outside the 100-year floodplain.
  3. The lowest floor of any structure is elevated above the base flood elevation or is designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.
  4. The use complies with all other applicable laws and regulations.

Also, the statute ensures that local ordinances meet the minimum requirements of participation in the National Flood Insurance Program (NFIP), which will afford residents the ability to purchase flood insurance through the NFIP. Additionally, communities with such ordinances will be afforded priority in the consideration of applications for loans and grants from the Clean Water Revolving Loan and Grant Fund.

### **Acquisition**

Municipalities can eliminate the risk of hazards through their power to acquire property, either in fee or lesser interest such as an easement. This removes the property from the private marketplace, thereby eliminating or reducing the possibility of inappropriate development. North Carolina legislation empowers municipalities to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease or eminent domain [NCGS Chapter 160A Article 11].



## **Taxation**

The power to levy taxes and special assessments has been delegated to municipalities by the North Carolina legislature [NCGS 160A Article 9]. This power allows municipalities to set preferential tax rates for areas unsuitable for development, such as wetlands, thereby discouraging development in hazardous areas. Local governments may also levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving beach erosion control, or flood and hurricane protection works within a designated area [NCGS 160A 238].

## **Spending**

Counties and municipalities have been granted power to make expenditures in the public interest by the North Carolina General Assembly. An annual budget and a Capital Improvement Plan (CIP) can include hazard mitigation efforts. A CIP serves as a schedule for providing county or municipal services over a specified period of time. Committing to a timetable for the extension of facilities and services, local governments can effectively steer future growth and development and mitigate the impacts of natural hazards. The Town of Stedman does prepare an annual budget, but does not have a CIP.

## **Fiscal Capability**

The North Carolina General Assembly has empowered municipalities to make expenditures in the public interest [NCGS 160A 475]. The primary source for funding these expenditures comes from property taxes. These revenues generally finance critical services available and delivered on a daily basis. Examples of these services include: public utilities, solid waste management, emergency services, health and social services, and schools. The Town of Stedman does not have available funds to support special projects such as hazard mitigation activities. Stedman looks to the following sources for hazard mitigation funding:

## **Government Funding**

Federal and State funds are available to local governments for the development and implementation of hazard mitigation plans. These sources are listed below.

### **Federal Funding**

Hazard Mitigation Grant Program (HMGP) - This program provides funding for hazard mitigation measures following a Presidential disaster declaration. Even though the Federal government supplies the majority of the funds for this program, the program is administered on the State level. HMGP funds can be used for projects such as acquisition or relocation, retrofitting, development of local mitigation standards and comprehensive mitigation plans, structural hazard control and the purchase of equipment to improve preparedness and response.

Pre Disaster Mitigation Program Grants (PDM) - Pre Disaster Mitigation Program provides funding to States and local jurisdictions for cost-effective hazard mitigation actions. FEMA provides PDM grants to States, that in turn, provide sub-grants to local governments for mitigation activities such as planning and the implementation of projects identified through the evaluation of natural and man-made hazards.

Flood Mitigation Assistance Programs - This program (FMAP) furnishes mitigation assistance to States, local jurisdictions and individuals to reduce or eliminate the long-term risk of flood damage to the built environment and real property. FMAP is available on an annual basis and eligibility is based upon a jurisdiction participating in the National Flood Insurance Program and developing a mitigation plan. These funds may be used for elevation and/or dry flood proofing of structures, acquisition of real property, relocation or demolition of structures, as well as other minor structural projects.

National Flood Insurance Program - Participation in this risk-sharing program requires jurisdictions to adopt and enforce floodplain management ordinances designed to reduce future losses.

Buy-Out Programs - Funding is available to buy back floodplains, relocate residents, and demolish structures in order to eliminate or reduce payouts for recurring flood damage.

Earthquake Hazard Reduction Grants - These funds are available to States having a moderate or high risk of seismic activity.

Community Development Block Grants - The Community Development Block Grant (CDBG) is designed to assist counties and municipalities in rehabilitating substandard dwelling units and to expand economic opportunities, primarily for low-to-moderate income families. Additionally, as a result of a Presidential declared disaster, CDBG funds may be used for long-term needs such as acquisition, reconstruction, and redevelopment of disaster-affected areas.

Small Business Administration (SBA) Pre-Disaster Mitigation Loan Program - The purpose of this program is to make low-interest, fixed-rate loans to eligible small businesses for the purpose of implementing mitigation measures to protect business property from damage that may be caused by future disasters. The program is a pilot program, which supports the Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation Program.

Ability to Pay - The North Carolina Department of Commerce has ranked the 100 counties in an economic tier system due to the Lee Quality Jobs and Business Expansion Act of 1966, which provides for a sliding scale of State tax credits for economic investment. This Act has become North Carolina's primary development tool in an effort to assist smaller rural counties become economically competitive. The most economically depressed counties are ranked in Tier 1 and the most economically prosperous are ranked in Tier 5. These rankings are evaluated annually based on (1) population growth, (2) unemployment rate, and (3) per capita income.

The tier ranking is widely used by the State as a measure of an individual county's ability to pay when applying for State and Federal grants. Cumberland County is ranked as a Tier 4 County.

## **Non-Government Funding**

Another potential source of revenue for local mitigation efforts are the contribution of non-governmental organizations, such as churches, charities community relief funds, the American Red Cross, hospitals, for-profit businesses and non-profit organizations, such as nature conservancy and land trust organizations.

## **Technical Capability**

The Town of Stedman has limited resources for technical staff. The Town relies on the following technical sources:

### **State and Federal Technical Assistance**

Agencies such as the Federal Emergency Management Agency (FEMA) and the North Carolina Division of Emergency Management (NCDEM) have made available numerous implementation manuals and other resource documents. These manuals provide information on mitigation techniques for various hazards, including hurricanes, floods, wildfires, tornadoes and earthquakes. Additionally, they provide technical information on engineering principles, construction methods, costs and suggestions for how techniques can be financed and implemented. Federal agencies such as the U.S. Army Corps of Engineers and Soil Conservation Service also provide similar services.

## **Statewide Floodplain Mapping Initiative**

The State of North Carolina, through the Federal Emergency Management Agency's Cooperating Technical Community partnership initiative, has been designated as a Cooperating Technical State (CTS). As a CTS, the State will assume primary ownership and responsibility for Flood Insurance Rate Maps (FIRM) for all North Carolina communities. This project included conducting flood hazard analysis and producing updated digital FIRM maps).

The State has acquired raw elevation data for the six eastern river basins, Cape Fear, Lumber, Neuse, Pasquotank, Tar-Pamlico, and White Oak, which will be used to develop Digital Elevation Models (DEMs) update flood hazard data. The updated flood hazard data provides current, accurate information for local jurisdictions and property owners to make sound site planning and design decisions when building new structures and infrastructure and retrofitting existing structures.

## **Local Technical Assistance**

Cumberland County has a geographic information system (GIS) that provides essential information and technology for hazard response and mitigation. The GIS system provides detailed data on property ownership, land use type and location, values of property and structures, location of the Special Flood Hazard Area and other infrastructure.

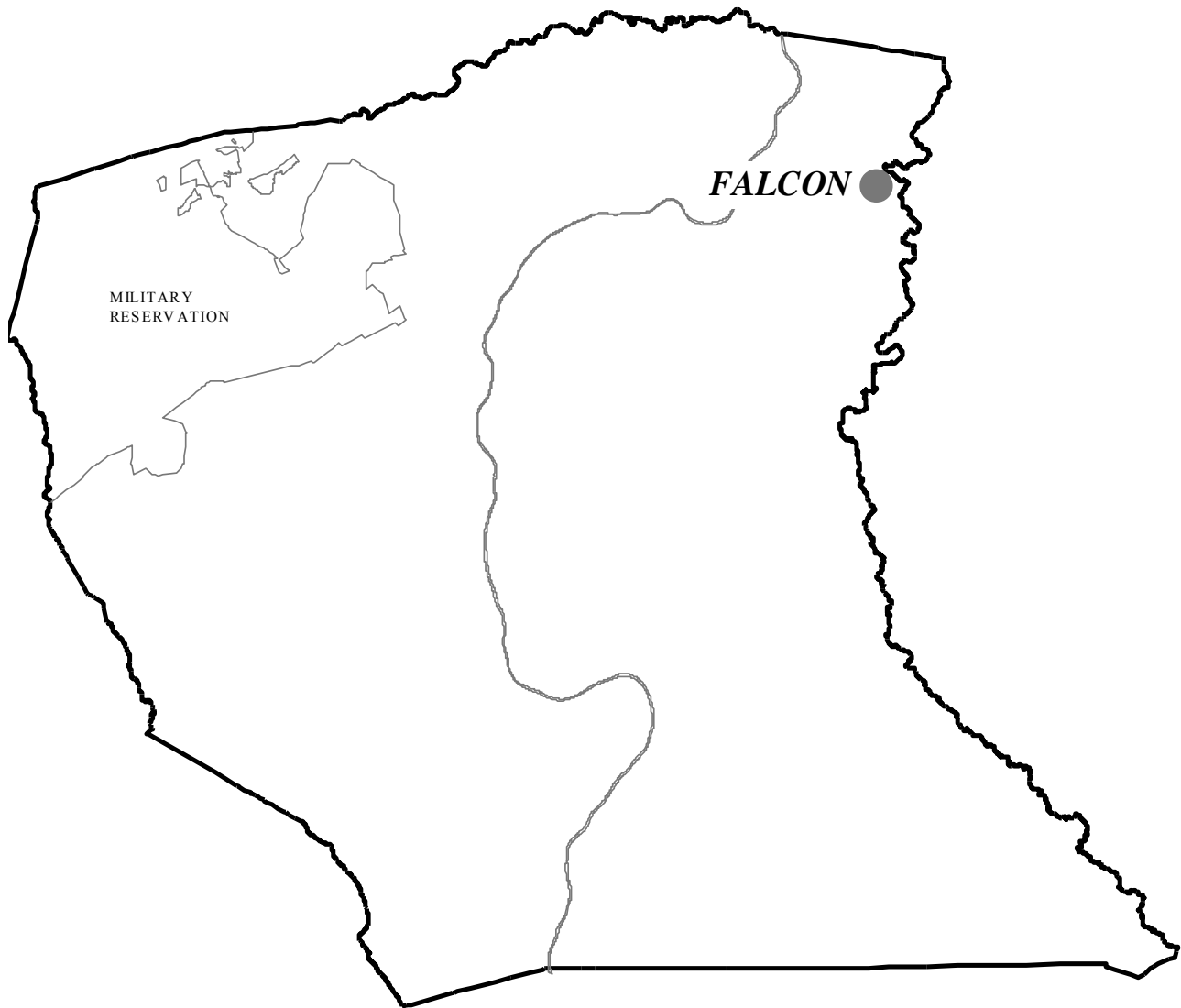
This system provides quick access and processing of detailed data that can be used to assist in deployment of resources, before, during and after a natural disaster, as well assists in planning for the mitigation of future disasters.

As previously mentioned in the Unincorporated Area Hazard Mitigation Plan Section entitled Local Departments, Agencies and Organizations, Stedman has access to a responsive and highly trained staff who are capable of implementing mitigation strategies, as well as educating the public about potential hazards and the process necessary to mitigate these hazards.

## **Political Capability**

The Stedman Town Board of Commissioners is knowledgeable of the potential hazards faced by their respective jurisdictions, as well as past history of hazard events and recovery efforts. Additionally, the Cumberland County Joint Planning Board (serving Stedman) is aware of the importance of hazard mitigation planning. Due to this knowledge and understanding, the current and future political climates are expected to be favorable for supporting hazard mitigation strategies.

# ***TOWN OF FALCON HAZARD MITIGATION PLAN***



# TOWN OF FALCON HAZARD MITIGATION PLAN

## COMMUNITY PROFILE

The Town of Falcon, approximately 1.25 square miles in size, is located in the extreme northeastern portion of the County on the Sampson County Line situated on the South River. A portion of the Town is actually in Sampson County but is consumed by swampland. Slightly sloped, the Town's stormwater runoff drains from west to east through a drainage ditch to the South River. Rural in character (no commercial uses within the Town limits), Falcon is home to the headquarters of the Pentecostal Holiness church and the Falcon Children's Home and these facilities are its major employers. According to the North Carolina Office of Management and Budget, its 2009 estimated population is 350 persons. A Mayor-Council form of government with a mayor and four commissioners govern the Town. The chief operating officer is the Town Clerk.

## IDENTIFYING AND PROFILING HAZARDS

For this update the Technical Committee reviewed **Table A1 – Hazard Identification and Analysis and Table A2 – Summary by Hazard Vulnerability by Jurisdiction**. The Technical Committee determined the following hazards still could affect Falcon: hurricane, drought, thunderstorms, severe winter storms, tornadoes, extreme heat, wildfires, earthquakes, tsunamis and volcanoes. Additionally, the Technical Committee focused on flooding since it is associated with and caused by other types of hazards, such as thunderstorms, hurricanes and tornadoes. During the period between January 1950 and June 2010, Falcon has experienced eight hurricanes, two documented thunderstorm, one hailstorm, one drought, 15 winter storms, one extreme heat event and one flash flood per NOAA history profile of Local Storm Events. It is highly likely that thunderstorms and extreme heat events will occur in the future. Additionally, it is likely that Falcon will experience hurricanes, tornadoes, droughts, and severe winter storms. Localized flooding, wildfires and earthquakes are possible. Falcon has not experienced documented tornadoes, wildfires, and earthquakes. Detailed information on each hazard type and their profile are contained in Appendix A - Hazard Profile.

## MITIGATION STRATEGIES

Town of Falcon adopted the three (3) goals developed by the Technical Committee to be achieved by its Mitigation Plan. These goals are the basis for a more specific plan of action. The following goals are broad policy Statements aimed at guiding and directing future activity so that persons, property, government, and infrastructure are protected from the impacts of the natural hazards that affect Town of Falcon.

### GOAL #1

Reduce vulnerability of Cumberland County and its municipalities to all natural hazards for existing development, future development, redevelopment and infrastructure.

## GOAL #2

Identify and protect all properties/natural resources that are at risk of damage due to a hazard and to undertake cost-effective mitigation measures to minimize losses.

## GOAL #3

Improve public awareness, education and outreach programs for the natural hazards that Cumberland County and its municipalities are most likely to experience.

Within the following pages, mitigation actions for the Town of Falcon are listed and will identify the following information for each action:

- Hazard targeted – *Hazard the action is targeted to mitigate.*
- Goals addressed – *Goal(s) the action will address.*
- Document reference – *Ordinance(s), Policies or Programs that the action references, if any.*
- Whether it would be a new policy or continuation or an amendment to an existing policy
- Priority – *Each action ranked in terms of overall importance (high, moderate or low). Priorities were based upon the following criteria: cost-benefit, hazard identification and profile, vulnerability and capability assessments, and mitigation goals.*
- Funding sources – *List of funding source or potential funding source*
- How the action will mitigate the hazard
- How the action will reduce overall vulnerability
- Will the action be:
  - Cost effective – *Is a measure of how well the cost achieves the intended action.*
  - Environmentally Sound – *Is a determination if technology exists within the financial means of the jurisdictions that can achieve an action.*
  - Technically feasible *The actions has minimal or no harm to nature or the environment.*
- On-going, Short-term or Long-term Implementation - *On-going actions are those that currently exist and should be continued. Short-term actions are those that can be implemented within existing resources and should be accomplished within a time frame of six (6) months to two (2) years. Long-term actions will take additional resources or authorities and should be organized to begin implementation within a time frame of 3-5 years.*
- Person(s) or department responsible for the action – *Person(s) or Department(s) responsible for implementing the action.*
- Benchmark and indicator of progress – *Explains what needs to be accomplishment to meet this action.*
- Update – *Explains what has or has not been done to this action.*

The Hazard Mitigation Technical Committee looked at all the actions from the original Plan and the Updated Plan and considered the jurisdiction's cost of the action to be taken and their cost if no action is taken. In most cases it was determined that it was far less costly for the jurisdictions to take preventive action whenever possible than wait until a hazard occurred, therefore most of the actions taken are more preventive in nature. Most of the jurisdictions have limited financial resources to establish capital projects that address existing facilities vulnerable to the various hazards, such as relocating, removing, purchasing vulnerable properties; providing public water, or placing electrical lines underground. The Hazard Mitigation Technical Committee determined that flooding was the most likely hazard to occur based on past records. Most of the past damage occurred on properties located in the Special Flood Hazard Area. Many of these properties are aged and through attrition and general decay will eventually

be removed from the hazardous area. Preventive measures will keep new structures from being built in these areas.

**ACTION 1: Restrict Residential And Non-Compatible Uses Within The Special Flood Hazard Area.**

<b>Hazard Targeted</b>	Flood
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Town of Falcon Zoning Ordinance
<b>New, Continuation, Amendment</b>	Completed (Zoning Map and Ordinance)
<b>Priority</b>	High
<b>Funding</b>	Not Applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Prohibit development within the special flood hazard area and promote the floodplain as an environmental corridor and open space area.
<b>Reduce Overall Vulnerability</b>	Limit future vulnerable types of development within the flood hazard area thus lessening the losses during a flood.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Short-term
<b>Person(s) or Department Responsible</b>	Cumberland County Planning Department
<b>Benchmark and Indicator Of Progress</b>	The Town adopted the CD-Conservation District on October 1, 2007. The CD (Conservancy District) applies mainly to the Special Flood Hazard Area which limits the type of permitted and special uses within the Special Flood Hazard Area. As rezoning cases are received by the Planning Department that includes portions of the Special Flood Hazard Area the Planning Staff and Falcon Town Board require that the Special Flood Hazard Areas be zoned CD (Conservancy District) which prohibits residential and non-compatible uses.



**ACTION 2:**    *Encourage The Use Of Cluster Type Development To Preserve Special Hazard Areas.*

<b>Hazard Targeted</b>	Flood
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Town of Falcon Subdivision Ordinance (Zero Lot Line Development)
<b>New, Continuation, Amendment</b>	Completed
<b>Priority</b>	High
<b>Funding</b>	Not Applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Preserve the special flood hazard area, while allowing property to be developed to its potential density.
<b>Reduce Overall Vulnerability</b>	Limit future developments within the special flood hazard area.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	On-going
<b>Person(s) or Department Responsible</b>	Cumberland County Planning Department
<b>Benchmark and Indicator Of Progress</b>	The Town adopted Zero Lot Line development standards on October 1, 2007 so that the developer can maximize their potential density and not encroach into the Special Flood Hazard Area. Those areas zoned for the CD (Conservancy District) prohibits residential and non compatible uses.

**ACTION 3: *Develop Uniform Flood Damage Prevention Ordinance.***

<b>Hazard Targeted</b>	Flood
<b>Goals Addressed</b>	1
<b>Document Reference, if applicable</b>	Cumberland County, City of Fayetteville, Town of Hope Mills and Town of Spring Lake Flood Damage Prevention Ordinances
<b>New, Continuation, Amendment</b>	Deletion of this action
<b>Priority</b>	Medium
<b>Funding</b>	Not applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Reduce the impact of new developments within special flood areas, thus reducing the amount of losses during a hazard and maintains compliance with NFIP.
<b>Reduce Overall Vulnerability</b>	Limiting new development within the flood hazard areas would reduce the losses during a hazard event.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Long-term
<b>Person(s) or Department Responsible</b>	Cumberland County Engineering Department
<b>Benchmark and Indicator Of Progress</b>	The Town of Falcon adopted the revised <u>Cumberland County Flood Damage Prevention Ordinance</u> and new FIRM maps on October 18, 2006. Originally the Town had no 100 year Floodplain within its town limits. The new digital FIRM maps adopted by the Town have designated Special Flood Hazard Area within the Town. Also continues compliance with NFIP. See Unincorporated Area Action #6 for further explanation of the deletion of this action.

**ACTION 4: *Revise Subdivision Ordinance To Require That All Utilities Be Placed Underground With The Exception Of High Voltage Electrical Transmission Lines.***

<b>Hazard Targeted</b>	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms, and Winter Storms)
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Town of Falcon Subdivision Ordinance
<b>New, Continuation, Amendment</b>	Completed
<b>Priority</b>	Medium
<b>Funding</b>	Not Applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Reduce the overall impact of lost utility services and protect the public health, safety, and welfare.
<b>Reduce Overall Vulnerability</b>	Reduce damage cost, loss of service, and eliminate life-threatening situations to citizens and utility companies.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Short-term
<b>Person(s) or Department Responsible</b>	Cumberland County Planning Department and Electrical Providers
<b>Benchmark and Indicator Of Progress</b>	Currently, Falcon's Subdivision Ordinance requires "All development shall have utilities placed underground, where practical." Mapping of underground utilities is the responsibility of the electrical providers for the Town.

**ACTION 5:    *Develop A Program To Identify And Eliminate Existing Development That Is Below The Special Flood Hazard Elevation.***

<b>Hazard Targeted</b>	Flood
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Not applicable
<b>New, Continuation, Amendment</b>	Continuation
<b>Priority</b>	Moderate
<b>Funding</b>	Cumberland County Community Development (HUD Funds), Cumberland County General Fund and HMPG

**How the Action Will:**

<b>Mitigate the Hazard</b>	The program will assist in the identification of those residents that are located in repeating flood prone areas. Also it will develop a process that will assist in relocating those residents to a safer area.
<b>Reduce Overall Vulnerability</b>	Eliminate all structures that are prone to flooding.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Long-term
<b>Person(s) or Department Responsible</b>	Cumberland County Engineering Department, Cumberland County Planning Department, and Cumberland County Community Development
<b>Benchmark and Indicator Of Progress</b>	Based on the adopted new FIRM maps and the County's aerial photos, no existing buildings are located below the Special Flood Hazard base flood elevation.

**ACTION 6:    *Develop A Program To Ensure Drainage Ways, Culverts And Storm Drains Are Free Of Debris.***

<b>Hazard Targeted</b>	Flood
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	
<b>New, Continuation, Amendment</b>	Completed
<b>Priority</b>	High
<b>Funding</b>	Stormwater Fund

**How the Action Will:**

<b>Mitigate the Hazard</b>	Regular maintenance of debris from drainage ways, culverts and storm drains would provide the proper flow of water and reduce flooding.
<b>Reduce Overall Vulnerability</b>	Reduce vulnerability of flooding to streets, structures, and land located along drainage ways, culverts and storm drains.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Long-term
<b>Person(s) or Department Responsible</b>	Cumberland County Engineering Department
<b>Benchmark and Indicator Of Progress</b>	Currently the town ensures that the drainageways, culverts and storm drains are free of debris on Town streets and property. North Carolina DOT roads are maintained by the Department of Transportation.

**ACTION 7: Increase The Lowest Floor Elevation To 2 Feet Above The Base Flood Elevation.**

<b>Hazard Targeted</b>	Flooding
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Flood Damage Prevention Ordinance
<b>New, Continuation, Amendment</b>	Completed
<b>Priority</b>	High
<b>Funding</b>	Not Applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Require all developments to be built at a higher elevation than what is currently required.
<b>Reduce Overall Vulnerability</b>	Reduce the vulnerability of existing and redevelopment projects because they would be required to meet the new elevation, if substantial improvements are made. Future development would be built at a higher elevation, further reducing the vulnerability.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Short-term
<b>Person(s) or Department Responsible</b>	Cumberland County Engineering Department
<b>Benchmark and Indicator Of Progress</b>	The Town of Falcon adopted the revised <u>Cumberland County Flood Damage Prevention Ordinance</u> that requires the lowest floor elevation to be two feet above the base flood elevation.

**ACTION 8:    *Develop A Landscape Ordinance That Will Encourage Protection To Natural Areas Through Design And Provide More Vegetation In Urban Development.***

<b>Hazard Targeted</b>	Flood, Extreme Heat
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Town of Falcon Zoning Ordinance
<b>New, Continuation, Amendment</b>	Continuation
<b>Priority</b>	Moderate
<b>Funding</b>	Not applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Provide more pervious area for natural drainage and provide reduction in extreme heat.
<b>Reduce Overall Vulnerability</b>	Reduce the vulnerability to localized flooding and extreme heat.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Long-term
<b>Person(s) or Department Responsible</b>	Cumberland County Planning Department
<b>Benchmark and Indicator Of Progress</b>	The Town of Falcon adopted landscape requirements for new non-residential development's yard space and parking areas on January 9, 2006. There still needs to be additional amendments to the Town's Ordinance to improve on the protection to natural areas as far as landscaping. The Planning Staff will revisit the Town's Zoning ordinance in the near future and will tailor the protection to natural areas the same as the County's Zoning Ordinance.

**ACTION 9: *Revise Subdivision Ordinance Requiring Additional Access To Be Used As An Evacuation Route For Developments Located Near Special Hazard Areas.***

<b>Hazard Targeted</b>	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms and Wildfires)
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Town of Falcon Subdivision Ordinance
<b>New, Continuation, Amendment</b>	Deferred
<b>Priority</b>	High
<b>Funding</b>	Not applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Will provide an additional access for residents, public safety officials and emergency services to those developments located near a special hazard prone area.
<b>Reduce Overall Vulnerability</b>	Reduce the possibility of a life-threatening situation for residents, public safety and emergency services.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Short-term
<b>Person(s) or Department Responsible</b>	Cumberland County Planning Department
<b>Benchmark and Indicator Of Progress</b>	Currently, no amendments has been adopted for this action and also no new developments have taken place in or around Special Flood Hazard Areas since the adoption of this Mitigation Plan in January 2006



**ACTION 10: Encourage All Rest Homes To Have A Reciprocal Agreement.**

<b>Hazard Targeted</b>	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms, Winter Storms and Wildfires)
<b>Goals Addressed</b>	2
<b>Document Reference, if applicable</b>	Not applicable
<b>New, Continuation, Amendment</b>	Completed
<b>Priority</b>	High
<b>Funding</b>	Not applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Remove population from life threaten situation and will provide them shelter during recovery process.
<b>Reduce Overall Vulnerability</b>	Reduce losses of life and personal belongings.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	On-going
<b>Person(s) or Department Responsible</b>	Cumberland County Social Services Department
<b>Benchmark and Indicator Of Progress</b>	This reciprocal agreement currently exists with all rest homes located in Cumberland County (including Town of Falcon).The agreement is handled through Cumberland County Emergency Services.

**ACTION 11: *Identify Areas That Are Susceptible To Wildfires And Consider Prescribed Fire (Controlled Burning) Management Tool To Reduce The Impact Of Wildfire Hazards.***

<b>Hazard Targeted</b>	Wildfires
<b>Goals Addressed</b>	1; 2
<b>Document Reference, if applicable</b>	Not applicable
<b>New, Continuation, Amendment</b>	Deferred
<b>Priority</b>	High
<b>Funding</b>	Not applicable

**How the Action Will:**

<b>Mitigate the Hazard</b>	Provide a mechanism to limit the amount of damage to those areas susceptible to wildfires. This is very important to the small rural municipalities because most of the land surrounding them is undeveloped, woodlands, and farmland.
<b>Reduce Overall Vulnerability</b>	Reduce the amount of woodland that is lost to wildfires.

**Will the Action Be:**

<b>Cost Effective</b>	Yes
<b>Environmentally Sound</b>	Yes
<b>Technically Feasible</b>	Yes

<b>On-going, Short-term, Long-term Implementation</b>	Long-term
<b>Person(s) or Department Responsible</b>	NC Forest Service
<b>Benchmark and Indicator Of Progress</b>	Currently the Cumberland County office of Forest Service has developed a draft risk assessment of those areas of Cumberland County (including Town of Falcon) that are susceptible to wildfires. This risk assessment is general in nature and for in office use only. The NC Forest Service has completed five Community Wildfire Protection Plans for certain areas of Cumberland County.

## IMPLEMENTATION

Plan implementation will start from the time that it is adopted. The Town Board in conjunction with the Cumberland County Joint Planning Board will be responsible for pursuing the development of policies, programs, ordinances, amendments, and regulations as they are assigned by the actions listed above. The Cumberland County Joint Planning Board staff will prepare these planning documents, ensuring that the goals, objectives and strategies of these documents will be consistent with the Hazard Mitigation Plan and would not increase the hazard vulnerability or decrease hazard capability of Falcon. The Cumberland County Joint Planning Board (also serving on the Cumberland County Hazard Mitigation Steering Committee) would receive all planning documents for review and approval. Their comments are forwarded to the Falcon Board of Commissioners for review and adoption. The public will have an opportunity to provide input on these documents at public hearings before these entities. It will be the responsibility of the Town Clerk to ensure that these actions are carried out within the allotted time frame.

## MONITORING, EVALUATING, AND REPORTING PROGRESS

Periodic monitoring and reporting of the Falcon Hazard Mitigation Plan of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update is required to ensure that the goals and objectives for Town of Falcon are kept current and that local mitigation efforts are being carried out. The monitoring and reporting is to supplement the Plan within the five-year cycle. The Cumberland County Emergency Services Department will act as the contact and clearing house for relevant information.

The Plan shall be reviewed annually, unless a situation occurs making it necessary to review sooner (e.g. natural disasters, new FEMA maps—see Revisions and Updates). Town of Falcon shall request that the Cumberland County Joint Planning Board include this annual review in the Board's Work Program. The review will be coordinated with The Cumberland County Emergency Management Department. Then the report will be forwarded to the Falcon Board of Commissioners for review and adoption. The public will be given an opportunity to provide input regarding the Plan at public hearings before the Cumberland County Joint Planning Board and the Falcon Board of Commissioners.

The annual report will include the following:

1. An evaluation of the effectiveness and appropriateness of the mitigation actions proposed in the Plan.
2. A list of problems that have occurred in the implementation process.
3. Changes in Falcon's priorities.
4. Recommendations for changes, revisions, or amendments to the Plan.

The following questions will be helpful to the Town of Falcon in assessing their Hazard Mitigation Plan: (1) Do the goals and objectives address current and expected conditions; (2) Has the nature or magnitude of risks changed; (3) Are the current resources appropriate for implementing the Plan; (4) Are there implementation problems, such as technical, political, legal or coordination issues with other agencies/departments; (5) Have the outcomes occurred as expected; and (6) Did the agencies/departments and other partners participate in the Plan and planning process as proposed.

## REVISIONS AND UPDATES

As updates occur, the date, reason and responsible party should be noted. Updates or revisions that affect the Plan as a whole and impact any other jurisdiction(s) will require the approval of the jurisdiction(s) governing body.

At the end of every five-year cycle, the Hazard Mitigation Technical Committee will submit the hazard profile, vulnerability assessment and local capability assessment updates or revisions to FEMA and NCDEM for review. Increased development, increased exposure to certain hazards, the development of new mitigation capabilities or techniques and changes to Federal or State legislation are examples of changes that may affect the condition of the Plan. The updated Plan will be reviewed by the Cumberland County Joint Planning Board and its recommendation forwarded to the Falcon Board of Commissioners for consideration and adoption. Copies of any revision, amendment or update to the Plan must be filed with the Falcon's Town Clerk and Cumberland County Emergency Services Department and added to the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update and will be available to the public for review.

## Resolution

WHEREAS, the Town of Falcon desires to remain eligible for the State and Federal disaster relief funds in the event of a declared disaster in the Town; and

WHEREAS, the Falcon Board of Commission recognizes the value of having a Plan in place for identifying, prioritizing, and mitigating potential and real hazards that could affect the Town of Falcon; and

WHEREAS, Cumberland County Joint Planning Board Staff prepared the Falcon Hazard Mitigation Plan as part of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update and has revised the Plan as suggested by the North Carolina Division of Emergency Management after its submittal to all appropriate government entities for review and comments; and

WHEREAS, the North Carolina Division of Emergency Management has endorsed the Falcon Hazard Mitigation Plan as part of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update; and

NOW, THEREFORE, BE IT RESOLVED by the Falcon Board of Commissioners that it adopts the Falcon Hazard Mitigation Plan as part of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update; and

BE IT FURTHER RESOLVED that the Board of Commission resolve to annually review the Plan and make revisions to all sections regarding the Town of Falcon in the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update when new data and information becomes available, as mitigation measures are achieved, and as mitigation strategies evolve; and

FURTHER, that the Town of Falcon may update and revise the Falcon Hazard Mitigation Plan Update as part of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update as it relates to the Town of Falcon but does not affect any other jurisdictions. If any revision, update or amendment that involves another jurisdiction(s), the updates and revisions must be approved by the governing body of the affected jurisdictions. Copies of any revision, amendment or update to the Plan by the Town of Falcon must be filed with the Town Clerk and sent to the Cumberland County Emergency Services Department and added to the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update; and

FURTHER, that administrative changes, wording corrections, the hazard analysis, and vulnerability assessment or other such portions of the Falcon Hazard Mitigation Plan as part of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update, do not require additional action by the Falcon Board of the Commissioners.

Adopted 1st day of August, 2011

Attest:

Berinda D. White  
Town Clerk

Chris A. Long  
Mayor, Town of Falcon

## VULNERABILITY ASSESSMENT

The vulnerability assessment of the population and facilities in the Town of Falcon examined the type and location of development, infrastructure, and public buildings. As mentioned previously in the Identifying and Profiling Hazards Section above, and the Vulnerability Assessment of the overall County Section, Falcon has experienced some of the same hazard events as the overall County. The types of hazards and the areas they impact, relative to the Town of Falcon, are delineated in **Table A1 - Hazard Identification and Analysis** and **Table A2 - Summary of Hazard Vulnerability by Jurisdiction** located in Appendix A - Hazard Profile.

### Current Conditions

Information compiled for the Town of Falcon through GIS, tax records, existing studies, zoning and subdivision regulations, records, and data from other Federal, State and local agencies shows vulnerable facilities and special populations. Current conditions of development and facilities are shown in **Table 36 - Falcon Private Buildings Vulnerability Assessment**. Private development in the Town comprises 79 single-family dwellings valued at \$19,987,186 accommodating 210 persons; two commercial structures valued at \$464,348 impacting 10 persons; industrial development consists of two structure valued at \$2,376,618 impacting 60 persons; and 39 other structures (Falcon Children's Home) valued at \$52,671,006 impacting 134 persons. A summary of private development in Falcon reveals that there are 122 structures with an approximate value of \$75,499,158 impacting 414 persons.

The critical facilities identified are listed in Appendix B – Critical Facilities Ranking. Critical facilities in the Town include infrastructure (such as streets, bridges, water lines, dams, etc.), a fire station, water tower, and government office and are shown on **Map 30 - Falcon Critical Facilities Location**. The infrastructure data collected, as shown in **Table 37 - Falcon Public Buildings and Critical Facilities Data**, reveals approximately 27,101 feet of streets valued at \$5,122,089; 27,062 feet of water lines valued at \$2,435,580; 59,560 feet of sewer lines valued at \$8,934,000; one bridge with an estimated replacement cost of \$300,000; and one dam valued at \$70,000 are within the Town of Falcon. The total costs of this infrastructure \$16,861,669. Other critical facilities include a water tower and building valued at \$933,736, a sewer pump station valued at \$400,000; two rest homes valued at \$2,911,800 impacting 75 persons, and one government office (Town Hall) valued at \$401,404 impacting three persons.

A summary of all public and private buildings and critical facilities within the Town of Falcon subject to a natural hazard is 128 structures and infrastructure with a total estimated valued of \$97,007,767 impacting 492 persons. Detailed information regarding the ranking of critical facilities relevant to Falcon is provided in Appendix B.

The Town of Falcon is impacted by natural flood hazard with approximately 116 acres of land within the flood prone area. Data and a map showing the vulnerable facilities and structures are on **Table 38 - Falcon Private Buildings Flood Vulnerability Assessment**, **Table 39 - Falcon Public Buildings and Critical Facilities Flood Vulnerability Data**, and in **Map 31 - Falcon Facilities and Structures within the Flood Prone Areas**. The topography in the Town has slight to moderate slopes, which drains eastward into the South River. A good portion of the drainage in the Town is handled by a major drainage ditch with tributaries that runs west to east through the center of the Town to the South River. Only the portion of the Town along the South River is within the Special Flood Hazard Area. The Town has participated in the National Flood Insurance Program since August 3, 2000. Presently, there are seven private homes valued at \$1,262,972 impacting 19 persons and 24 other private structures valued at \$17,574,250 impacting 90 persons. Public buildings and critical facilities vulnerable to flood include 677 feet of street valued at \$127,953; 479 feet of water lines valued \$43,110; and one dam valued at \$70,000. In summary 31 structures and other critical facilities valued at \$19,078,285 impacting 109

persons are located in Falcon's Special Flood Hazard Area. Some buildings are included in the Flood Vulnerability Assessment, if the parcel of land the building is on intersects the Flood Area, even though these buildings are not within the Special Flood Hazard Area. The Town of Falcon has not had any repetitive loss structures. Prior to new digital FIRM maps the Town of Falcon did not have any designated flood located inside the Town.

## Vulnerable Populations

Vulnerable population data was taken from the profile of General Demographic Characteristics of Falcon in the 2000 Census. Vulnerable population is defined as the elderly (75 year of age and older), institutionalized persons, disabled persons, persons with a language barrier, persons below the poverty level, persons without a vehicle or telephone in their home, those living in certain mobile homes, and renters.

Current data shows that the Town of Falcon has 60 persons over 75 years old and 54 institutionalized. Census data shows that there are 51 disabled persons and no individuals with a language barrier in the Town. Only two families are listed as below the poverty level. There are no individuals in the Town without vehicle or telephone access other than residents of the two rest homes. There are approximately 29 mobile homes and 22 families live in rental units in the Town. Since the 2010 Census data was not available during the preparation of this document, we have kept the Census 2000 data in the document. If this data comes available during the review process, we will update the final document with the 2010 data.

## Development Trends and Projections

Development trends that may impact hazard mitigation include the direction of growth, current zoning and future land use. An activity in the Town that may impact future development includes the Town's provision of public sewer as part of NORCRESS. The town already receives water from the Town of Dunn in Harnett County. The completion of the Fayetteville Outer Loop will impact the Town by providing quick access into the Fayetteville metro area. These actions will enhance the attractiveness of the Town for development.

Falcon zoning districts include suburban density residential- (two units or less per acre), low density residential (greater than two but less than six unit per acre), office and institutional, commercial, and manufacturing districts as shown on **Map 32 - Falcon Zoning Map**. Data shows that approximately 567 acres of suburban density residential (R20A and R40A), 175 acres of low density residential (R15 and R15A), 17 acres of office and institutional (O&I), 5 acres of commercial (CP and C1), and 15 acres of manufacturing (M).

The proposed land use for Falcon is shown on **Map 33 - Falcon Land Use Plan Map**. The Town adopted a detailed Plan on April 12, 2010 as part of the Northeast Cumberland Detailed Land Use Plan. This map indicates the community's vision for the future use of land. According to the Plan approximately 122 (15%) acres for open space, recreation and environmental corridor, 386 (48%) acres for low density residential, 244 (30.5%) acres of office & institutional, one acre of governmental, 21 (3%) acres of industrial, 14 (2%) acres of farmland, and 9 (1%) acres of commercial.

Projections for private buildings in Falcon in 2025 shows that there will be 96 single family dwellings, valued at \$24,245,946 impacting 255 persons; two commercial buildings valued at \$563,289 impacting 12 persons; 47 other structures (Falcon Children's Home) valued at \$63,893,856 impacting 163 persons; and two industrial structures valued at \$2,883,015 impacting 73 persons. In summary, the number of private buildings in Falcon subject to a natural hazard in 2025 is projected to be 147 buildings with an estimated value of \$91,586,106 impacting 503 persons (See Appendix C-Methodology for projection method)

The projected number of private buildings in the flood prone areas in 2025 is eight single-family dwellings valued at \$1,532,079 impacting 23 persons. In summary, it is projected that in 2025 there will be 37 private buildings valued at \$22,850,954 impacting 132 persons subject to flooding in flood prone areas, if no actions are taken. The implementation of mitigation actions in this document should reduce the number of these at risk properties. The projected number of public buildings and critical facilities located in Falcon's Special Flood Hazard Areas in 2025 is 821 feet of streets valued at \$155,217; 581 feet of water lines valued at \$52,296; and one dam valued at \$84,915. In summary, it is projected that in 2025 there will be 37 private buildings and infrastructure valued at \$23,143,382 impacting 132 persons.



**Table 36 - Falcon Private Buildings Vulnerability Assessment**

**Hazard Type(s):** Hurricane, Drought, Thunderstorms, Severe Winter Storms, Tornadoes, Extreme Heat, Wildfires, and Earthquakes

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Private Buildings	* Current Value	Current Number of People	Projected Number of Private Buildings	Projected Value	Projected Number of People
Single-Family Residential	79	\$9,987,186	210	96	\$24,245,946	255
Multi-Family Residential	0	\$0	0	0	\$0	0
Commercial	2	\$464,348	10	2	\$563,289	12
Industrial	2	\$2,376,618	60	2	\$2,883,015	73
Other	39	\$52,671,006	134	47	\$63,893,856	163
<b>Subtotal</b>	<b>122</b>	<b>\$75,499,158</b>	<b>414</b>	<b>147</b>	<b>\$91,586,106</b>	<b>503</b>

\* Values and building counts from County GIS- January 2010  
The methodology used in preparing this data is described in Appendix C.

**Table 37 - Falcon Public Buildings and Critical Facilities Vulnerability Assessment**

**Hazard Type(s):** Hurricane, Localized Flooding, Drought, Thunderstorms, Severe Winter Storms, Tornadoes, Extreme Heat, Wildfires, and Earthquakes

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Public Buildings & Critical Facilities	* Current Value	Current Number of People	Projected Number of Public Buildings	Projected Value	Projected Number of People
Sewage Pump Station	1	\$400,000	0	1	\$485,230	0
Water Tower & Building	2	\$933,736	0	2	\$1,132,691	0
Rest Homes/Hospitals	2	\$2,911,800	75	2	\$3,532,230	91
Schools	0	\$0	0	0	\$0	0
Infrastructure (roads, bridges, drainage, dams, etc.)	Water Lines - 27,062' Streets - 27,101' Bridges - 1 Dams - 1 Sewer Lines - 59,560	\$2,435,580 \$5,122,089 \$300,000 \$70,000 \$8,934,000	N/A	Water - 32,828' Streets - 32,876' Bridges - 1 Dams - 1 Sewer Lines - 72,251'	\$2,954,540 \$6,213,476 \$363,922 \$84,915 \$10,837,608	N/A
Police Stations	0	\$0	0	0	\$0	0
Fire Stations	0	\$0	0	0	\$0	0
Hazard Materials Facilities	0	\$0	0	0	\$0	0
Government offices	1	\$401,404	3	1	\$486,933	4
Emergency Shelters	0	\$0	0	0	\$0	0
Public Housing	0	\$0	0	0	\$0	0
<b>Subtotal</b>	<b>Buildings - 6 Infrastructure</b>	<b>\$4,646,940 \$16,867,669</b>	<b>78</b>	<b>Buildings - 6 Infrastructure</b>	<b>\$5,637,084 \$20,454,461</b>	<b>95</b>
<b>TOTAL:</b>	<b>Buildings - 128 &amp; Infrastructure</b>	<b>\$97,007,767</b>	<b>492</b>	<b>Buildings - 153 Infrastructure</b>	<b>\$117,677,651</b>	<b>598</b>

\* Values and building counts from County GIS - January 2010  
The methodology used in preparing this data is described in Appendix C.

**Table 38 - Falcon Private Buildings Flood Vulnerability Assessment**

**Hazard Type(s):** Flood

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Private Buildings	* Current Value	Current Number of People	Projected Number of Private Buildings	Projected Value	Projected Number of People
Single-Family Residential	7	\$1,262,972	19	8	\$1,532,079	23
Multi-Family Residential	0	\$0	0	0	\$0	0
Commercial	0	\$0	0	0	\$0	0
Industrial	0	\$0	0	0	\$0	0
Other	24	\$17,574,250	90	29	\$21,318,875	109
<b>Subtotal</b>	<b>31</b>	<b>\$18,837,222</b>	<b>109</b>	<b>37</b>	<b>\$22,850,954</b>	<b>132</b>

\* Values and building counts from County GIS - January 2010  
The methodology used in preparing this data is described in Appendix C.

**Table 39 - Falcon Public Buildings and Critical Facilities Flood Vulnerability Assessment**

Hazard Type(s): Flood

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Public Buildings & Critical Facilities	* Current Value	Current Number of People	Projected Number of Public Buildings	Projected Value	Projected Number of People
Sewage Treatment Plants	0	\$0	0	0	\$0	0
Water Towers	0	\$0	0	0	\$0	0
Rest Homes/Hospitals	0	\$0	0	0	\$0	0
Schools	0	\$0	0	0	\$0	0
Infrastructure (roads, bridges, drainage, dams, etc.)	Streets - 677' Water Lines - 479' Dams - 1	\$127,953 \$43,110 \$70,000	N/A	Streets - 821' Water Lines - 581' Dams - 1	\$155,217 \$52,296 \$84,915	N/A
Police Stations	0	\$0	0	0	\$0	0
Fire Stations	0	\$0	0	0	\$0	0
Hazard Materials Facilities	0	\$0	0	0	\$0	0
Government offices	0	\$0	0	0	\$0	0
Emergency Shelters	0	\$0	0	0	\$0	0
Public Housing	0	\$0	0	0	\$0	0
<b>Subtotal</b>	<b>Buildings - 0 Infrastructure-1,156'</b>	<b>\$0 \$241,063</b>	<b>0</b>	<b>Buildings - 0 Infrastructure</b>	<b>\$0 \$292,427</b>	<b>0</b>
<b>TOTAL:</b>	<b>Building - 31 &amp; Infrastructure</b>	<b>\$19,078,285</b>	<b>109</b>	<b>Buildings - 37 &amp; Infrastructure</b>	<b>\$23,143,382</b>	<b>132</b>

\* Values and building counts from County GIS - January 2010










1 Private sewage treatment plant to be removed after the completion of NORCRESS sewer project  
The methodology used in preparing this data is described in Appendix C.

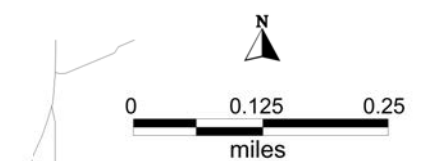
# Map 30

## Town of Falcon

### Critical Facilities

#### Legend

-  Water Tower
-  Sewage Treatment Plant
-  Bridge
-  Town Hall
-  Municipal Boundary
-  Streams-Rivers
-  Lakes
-  Dams
-  Resthome



Map 31

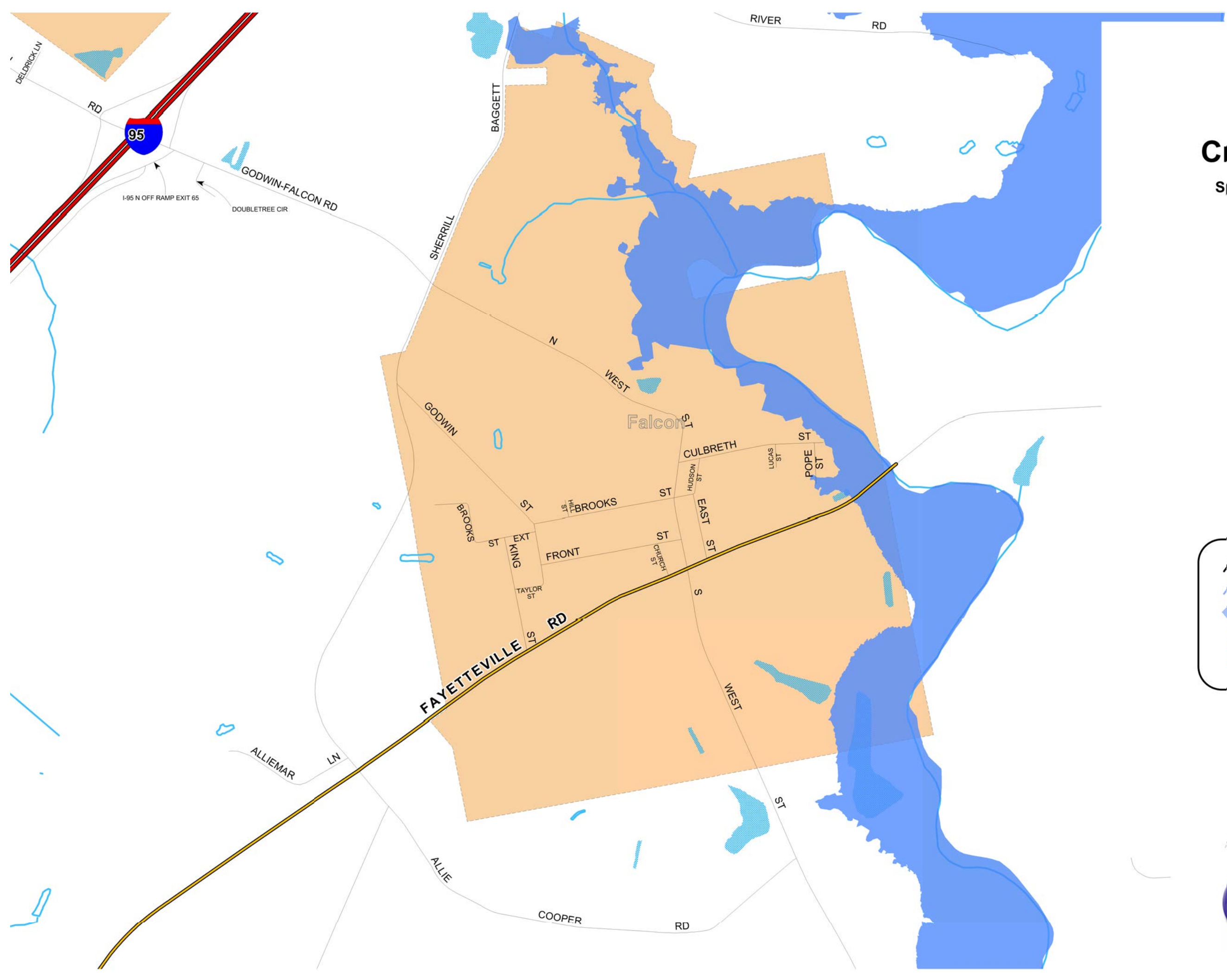
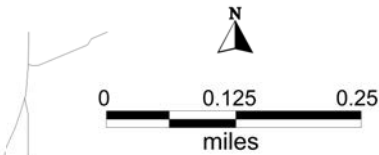
# Town of Falcon

## Critical Facilities

Special Flood Hazard Area

### Legend

-  Municipal Boundary
-  Streams-Rivers
-  Lakes
-  Dams
-  Special Flood Hazard Area





**MAP 32**  
**TOWN OF FALCON**  
**ZONING**

GODWIN-FALCON RD

N WEST ST

SAMPSON  
COUNTY

SHERRILL BAGGETT RD

FAYETTEVILLE RD

FAYETTEVILLE RD

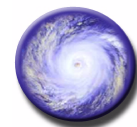
S WEST ST

SCALE: NOT TO SCALE

**Legend**

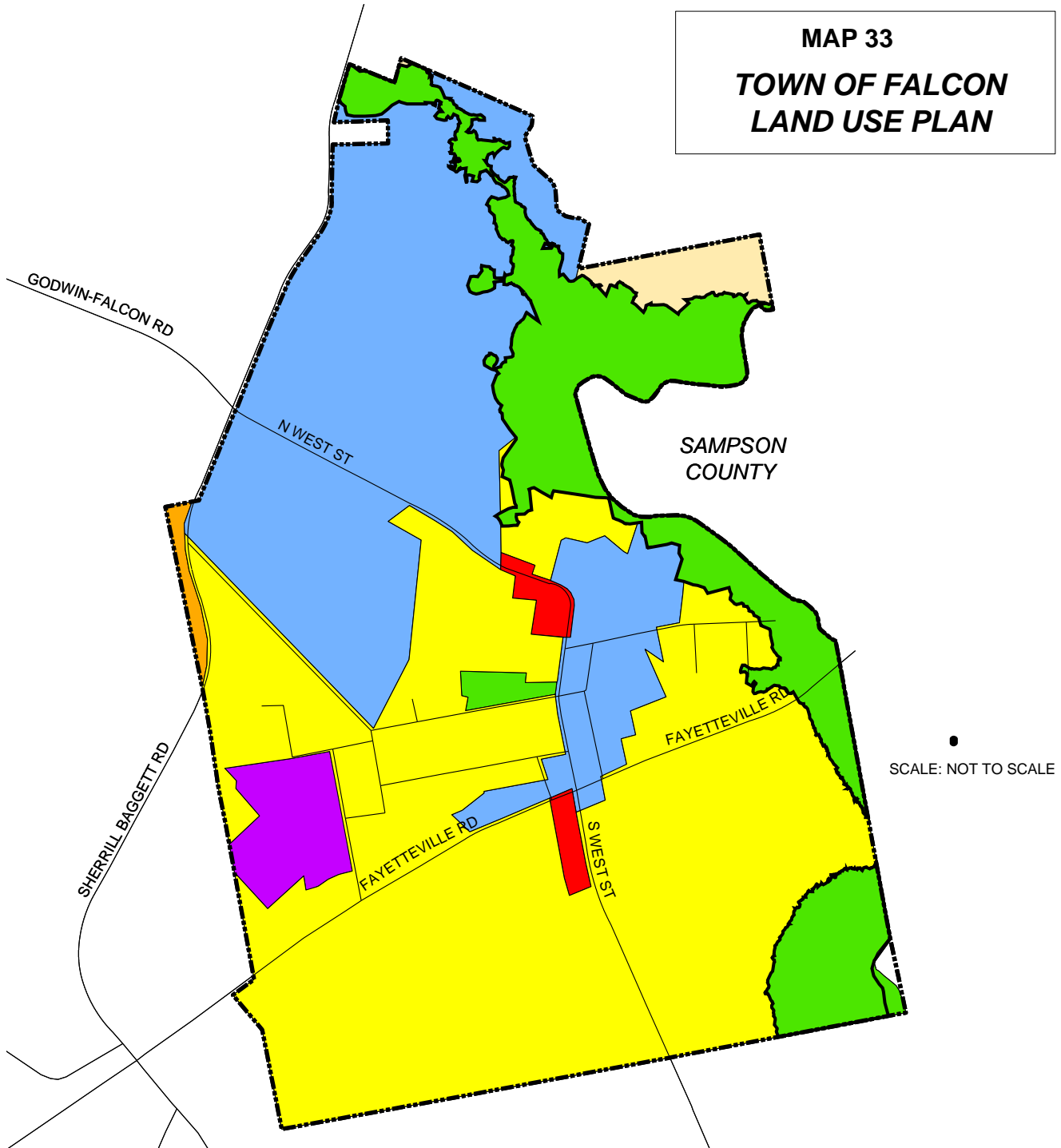
- |                                      |                                    |
|--------------------------------------|------------------------------------|
| ----- MUNICIPAL BOUNDARY             | Yellow R15A - RESIDENTIAL DISTRICT |
| Special Flood Hazard Area            | Blue O&I - OFFICE & INSTITUTIONAL  |
| Light Orange A1 AGRICULTURE DISTRICT | Red C(P) - PLANNED COMMERCIAL      |
| Yellow R40A - RESIDENTIAL DISTRICT   | Red C1 - COMMERCIAL DISTRICT       |
| Yellow R20 - RESIDENTIAL DISTRICT    | Purple M - INDUSTRIAL DISTRICT     |
| Yellow R20A - RESIDENTIAL DISTRICT   | Green CD - CONSERVANCY DISTRICT    |
| Yellow R15 - RESIDENTIAL DISTRICT    |                                    |

**NOTE: ALL OF THE TOWN OF FALCON IS DESIGNATED FOR THE FOLLOWING HAZARDS: HURRICANES, TORNADOES, THUNDERSTORMS, DROUGHTS, SEVERE WINTER STORMS, EXTREME HEAT, WILDFIRES, AND EARTHQUAKES.**



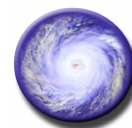
Cumberland County  
Multi-Jurisdictional  
**HAZARD  
MITIGATION  
PLAN  
UPDATE**

**MAP 33**  
**TOWN OF FALCON**  
**LAND USE PLAN**



**Legend**

- |                            |                        |
|----------------------------|------------------------|
| ----- MUNICIPAL BOUNDARY   | Office & Institutional |
| Special Flood Hazard Area  | Commercial             |
| Farmland                   | Industrial             |
| Low Density Residential    | Open Space             |
| Medium Density Residential |                        |



Cumberland County  
 Multi-Jurisdictional  
**HAZARD  
 MITIGATION  
 PLAN  
 UPDATE**

**NOTE: ALL OF THE TOWN OF FALCON IS DESIGNATED FOR THE FOLLOWING HAZARDS: HURRICANES, TORNADOES, THUNDERSTORMS, DROUGHTS, SEVERE WINTER STORMS, EXTREME HEAT, WILDFIRES, AND EARTHQUAKES.**



# CAPABILITY ASSESSMENT

## Local Departments, Agencies and Organizations

The Town of Falcon operates under the Mayor/Council form of government and employs a Town Clerk and a maintenance man (part-time). The Town provides administrative services and garbage pick-up. The following County Departments provide services to Town residents: Cumberland County Sheriff Department, Fire Station #17 Godwin-Falcon Volunteer Fire Department and Cumberland County EMS provide police and fire protection and emergency services; Cumberland County Animal Control, Health, Mental Health, Social Services, and Solid Waste Departments provide public health and human services; Cumberland/Fayetteville Parks and Recreation Department provides maintenance assistance for the Town Park; Cumberland County Planning and Inspections provides planning services and enforcement of the Falcon Zoning and Subdivision Ordinances and State building Code; County Engineering administers the Flood Damage Prevention Ordinance; the County Public Utilities Department administers the NORCRESS Sanitary District (Falcon is a member); and the County Tax Administration Department collects applicable taxes, fees and assessments for the Town. There are numerous State and Local Agencies and Organizations that provide services relevant to hazard mitigation for Falcon residents. A complete list was presented within the Cumberland County Capability Assessment above.

## Policy and Program Capability

This Section Includes the identification and evaluation of existing ordinances, policies, and programs that is relevant to the community's vulnerability to natural hazards. This inventory consists of specific mitigation initiatives, their effectiveness and strategies to improve mitigation effectiveness. Additionally, this information is contained within **Table 40 - Inventory of Local Ordinances, Policies and Programs Relevant to Hazard Mitigation Town of Falcon**.

Most of the actions in the original Mitigation Plan that require ordinance revisions or policy changes have been completed and/or adopted. The Planning Staff currently has an ongoing process of rewriting, updating (zoning and subdivisions) and creating new ordinances for several of the local jurisdictions, including Town of Falcon. These ordinances already comply with many of the mitigation actions that the Town has already endorsed. Those actions that have not been completed are more developer resistance and cost prohibit. The Technical Committee will continue educating citizens, elected officials and the development community concerning our mitigation efforts and actions.

Falcon Subdivision Ordinance - The Town of Falcon Subdivision Ordinance contains several sections that are relevant to hazard mitigation. These sections address specific design standards that mitigate hazards such as stormwater detention/retention, flooding, fire, drainage and severe weather storm damage.

Falcon Zoning Ordinance - The Town of Falcon Zoning Ordinance contains a section pertaining to hazard mitigation that provides specific standards that address building separation, thus reducing the possibility of uncontrolled fire.

Flood Damage Prevention Ordinance - Cumberland County has developed and adopted a Flood Damage Prevention Ordinance designed to minimize the public and private losses due to flood conditions in specific areas and to protect the public health, safety, and welfare. The Town of Falcon adopted this ordinance, which establishes the requirements for elevation and flood proofing (non-residential) to base flood elevation and a development permit.

National Flood Insurance Program and Community Rating System - The National Flood Insurance Program (NFIP) provides flood insurance to individuals in local jurisdictions that are members of the program. Membership in the Program is based upon the adoption and enforcement of floodplain management and development regulations. Compliance of the NFIP for the Unincorporated Area, Eastover, Falcon, Godwin, Linden, Stedman and Wade is responsibility of the Cumberland County Engineering Department. They maintain the Cumberland County flood maps and Flood Damage Prevention Ordinance and issue Floodplain Development Permits for those jurisdictions in accordance with compliance of NFIP. An element of the NFIP is the Community Rating System (CRS), which adjusts flood insurance premiums relative to a local jurisdiction's investment in flood damage mitigation. Inclusion in the CRS involves submitting a local jurisdiction's floodplain management procedures for evaluation.

NCDOT Subdivision Roads Minimum Construction Standards - The North Carolina Department of Transportation has established minimum construction standards for new subdivision roads (to be dedicated as public or private). According to North Carolina General Statutes, all new subdivision roads connecting to the State system must obtain a construction permit from a Division of Highways District Engineer and must meet these construction standards. Standards relevant to hazard mitigation include: surface and subsurface drainage, bridges, roadway dams, and specifications for design and construction to accommodate emergency vehicles.

#### 2030 Cumberland County Growth Vision Plan Policies, Actions, and Map

Cumberland County, along with all the municipalities in the County adopted this land use plan which serves as a guide for development. This Plan contains several recommendations relevant to hazard mitigation. The Plan recommends the provision of open space/environmental corridors along rivers and major water features, which reduces the amount of development within and adjacent to the floodplain and protects the natural riparian cover adjacent to these water features. Recommendations also include using environmental corridors as a network of greenways connecting recreation and school facilities with natural areas. The Plan recommends all development activity within the Special Flood Hazard Area be limited to low intensity uses. Development standards are also recommended to reduce the amount of impervious surfaces and to protect existing natural features. A general Land Use Plan Map was also adopted, which provides a guide for orderly growth and development. The Plan applies to all of the jurisdictions within the County including Falcon.

#### Cumberland County Land Use Policies Plan

Falcon, along with all the municipalities in the Cumberland County and Cumberland County have developed and adopted a land use policies plan which serves as a guide for development. This Plan contains location criteria for development relevant to hazard mitigation by limiting the type and intensity of development within the Special Flood Hazard Area.

#### Northeast Vision Plan

This Plan was a detailed land use plan that included the northeastern portion of Cumberland County which includes the Town of Falcon. Its objective was to develop a plan that respects the character of the Area, accommodates the anticipated growth; preserves and protects the natural features, historic and scenic sites, rural farm stead, and farmland; maintain the uniqueness of the Towns in the Area and create opportunities for the provision of public and commercial services to enhance the quality of life in the Area.

Falcon Area Parks and Open Space Master Plan - The Town of Falcon has developed a Parks and Open Space Master Plan for long-range parks, recreation and open space planning. This Master Plan provides recommendations for utilizing existing facilities, natural resources, and open spaces in a manner that will protect environmentally sensitive areas, as well as provides a plan for acquisition of land for active and passive recreation facilities.

2000 International Building Code with North Carolina Amendments - This Code provides specific standards for plumbing, building, mechanical and electrical construction, mandated by the State of North Carolina. This Code is under the jurisdiction of the North Carolina Department of Insurance and is enforced locally by the Cumberland County Planning and Inspections Department.

N.C. General Statutes 113A Article 4 Sedimentation Pollution control Act - This Act provides a mechanism to protect existing natural resources and the public health, safety and welfare through sedimentation and erosion control. The State of North Carolina administers permitting and enforcement measures for Cumberland County and the municipalities therein.

Mid-Carolina Rural Planning Organization - The Mid-Carolina Rural Planning Organization provides detailed planning and classifications for the road network within the Rural Planning Area in order to provide adequate traffic movement. Classifications and design specifications are assigned to roads in order to ensure adequate right-of-way and design as transportation improvements are initiated.

Cumberland County Emergency Operations Plan - Cumberland County prepared and adopted this Plan in order to reduce the vulnerability of people and property to a disaster and to provide an effective means of response in the event of a disaster. This Plan also includes an inventory of critical facilities that would be impacted during a disaster.

Sandhills Area Land Trust – The Sandhills Area Land Trust is a non-profit organization working with citizens, developers, local government, and landowners to preserve the natural resources and environment within the Sandhills. This organization is working with Cumberland County, as well as 6 other counties, to accept donations of land, arrange leases to protect special land holdings and works to negotiate conservation easements.

Cape Fear River Assembly - The Cape Fear River Assembly has a membership of approximately 400 and a 34-member Board of Directors representing 29 counties within the Cape Fear River Basin. The purpose of the Assembly is to provide the highest quality of life for residents within the Cape Fear River Basin through proper management of the Cape Fear River, its tributaries and adjacent land uses.

Sustainable Sandhills - This initiative, comprised of members of communities within 6 counties bordering Fort Bragg and Camp Mackall and the Military, is working to provide a model for regional sustainability planning. Sustainability planning focuses on balancing preservation of natural resources, economic development strategies, development, and Military operations. Cumberland County is represented within this initiative.

Joint Compatible Land Use Study 2003 - The purpose of this Study is to provide policies and implementation measures to mitigate conflicts between urban development and Military operations at Fort Bragg, Pope Air Force Base and Camp Mackall. Cumberland County is included within this Study.

**Table 40 - Falcon Inventory of Local Ordinances, Policies and Programs Relevant to Hazard Mitigation**

<b>TITLE &amp; ADOPTION DATE</b>	<b>DOCUMENT REFERENCE</b>	<b>PURPOSE &amp; DESCRIPTION</b>	<b>MITIGATION EFFECTIVENESS</b>	<b>RATIONALE FOR EFFECTIVENESS</b>	<b>MITIGATION STRATEGY</b>
Town of Falcon Subdivision Ordinance 6/2/98	Section 3.11	To provide for existing or future drainage needed to protect public health, safety, and welfare.	MODERATE	This Ordinance establishes minimum development standards.	Establish detailed development standards.
Town of Falcon Subdivision Ordinance 6/2/98	Section 3.13.1(b)	To provide standards for park, recreation, open space areas to protect public health, safety, and welfare.	HIGH	This Ordinance provides specific design standards that address stormwater detention/retention facilities, landscape buffers and the 100-year flood elevation.	
Town of Falcon Subdivision Ordinance 6/2/98	Section 3.16	To provide standards for lots located within areas of special flood hazard.	HIGH	This Ordinance provides specific standards that address lots subject to flooding.	
Town of Falcon Subdivision Ordinance 6/2/98	Section 3.17	To provide standards for street design needed to protect the public health, safety, and welfare.	MODERATE	This Ordinance provides specific standards that address street design to accommodate fire and rescue vehicles.	Amend to require additional entrance into developments, especially in special hazard areas, for rescue vehicle and evacuation routes.
Town of Falcon Subdivision Ordinance 6/2/98	Section 3.21	To provide standards for adequate physical separation of buildings to protect the public health, safety, and welfare.	HIGH	This Ordinance provides specific standards that address building separation.	
Town of Falcon Subdivision Ordinance 6/2/98	Table 1 Minimum Development Standards for Urban, Suburban and Rural Densities	To provide a development standard recommending underground utilities (except for high voltage electrical lines) for urban, suburban and rural residential development.	HIGH	This Ordinance provides a specific development standard that would reduce the impact of weather related disasters upon utilities.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENESS	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
Town of Falcon Subdivision Ordinance 6/2/98	Section 4.1	To provide standards for the construction of streets within a subdivision.	HIGH	This Ordinance provides specific standards that address drainage relevant to streets.	
Town of Falcon Subdivision Ordinance 6/2/98	Section 4.3	To provide standards for the construction of or improvements within a subdivision.	MODERATE	This Ordinance provides specific standards that address drainage during construction or improvements within a subdivision, such as drainage, underground utilities and installation of fire hydrants.	Amend to include standards to reduce the amount of impervious surfaces within a subdivision.
Town of Falcon Zoning Ordinance 3/5/91	Section 7.18	To provide standards for adequate physical separation of buildings to protect the public health, safety, and welfare.	HIGH	This Ordinance provides specific standards that address building separation.	
Town of Falcon Zoning Ordinance 3/5/91	Section 7.26 and 7.3	To provide adequate separation of structures in order to protect the public water quality as well as public health, safety, and welfare.	HIGH	This Ordinance requires separate yard space for buildings and zoning district dimensional requirements.	
Flood Damage Prevention Ordinance 10/18/06		To minimize the public and private losses due to flood conditions in specific areas and to protect the public health, safety, and welfare.	HIGH	This Ordinance outlines general standards required in all special flood hazard areas and specific development standards required in all special flood hazard areas where base flood elevation data has been provided. A floodplain development permit is required.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENESS	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
National Flood Insurance Program 10/03/00		To provide flood insurance for individuals within jurisdictions having membership in the program. Membership is based upon having floodplain management and development regulations. Compliance to the NFIP is the responsibility of the Cumberland County Engineering Department.	HIGH	Member	
NCDOT Subdivision Roads Minimum Construction Standards 7/1/85	Minimum Design and Construction Criteria Section	To provide standards for the design, construction and maintenance of subdivision roads in order to protect the public health, safety, and welfare.	HIGH	This manual outlines specific design, construction and maintenance standards to mitigate potential flooding due to subdivision road construction.	
2030 Growth Vision Plan, Policies, and Actions 01/18/09	Pages 37-38	To protect the special Flood Hazard Areas. To reduce the amount of impervious surfaces	Moderate	The Plan recommends all development activities be limited to low intensity uses such as open space, recreation, and adequately buffered agricultural activities	
Cumberland County Land Use Policies Plan 01/18/09	Page 28	To protect the Special floods Hazard Area	Moderate	The Plan recommends location criteria for development within the Special Flood Hazard Area	
Northeast Vision Plan	Pages 63-69	To preserve and protect the natural features, historic and scenic sites, rural farm stead, and farmland	Moderate	The Plan recommends the adoption of a water & sewer policy for extension into farmland areas; encourage farmer to participate in Volunteer Agricultural District; and protect the riverine system	